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Managerial Causes and Consequences of the Introduction of Credit Frameworks The case of Colombian Universities

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Managerial Causes and Consequences of the Introduction of Credit Frameworks: The Case of Colombian Universities

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A thesis submitted for the degree of Doctor Business
Administration
(Higher Education Management)

University of Bath

School of Management

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List of Abbreviations

1. IMF: International Monetary Fund
2. CINDA: Centro Interuniversitario de Desarrollo
3. CNA: Consejo Nacional de Acreditación
4. CONACES: Consejo Nacional de Aseguramiento de la Calidad de la Educación Superior
5. ECTS: European Credit Transfer and Accumulation System
6. HEI: Higher Education Institution
7. ICFES: Instituto Colombiano de Fomento a la Educación Superior
8. ICT: Information and Communication Technologies
9. IESALC: Instituto Internacional de la Unesco para la Educación Superior en América Latina y el Caribe
10. INNOVA-CESAL: Innova - Comunidad de Educación Superior en América Latina
11. ISI-WEB: International Statistical Institute – WEB
12. LMS: Learning Management Systems
13. NPM: New Public Management
14. OECD: Organization for Economic Co-operation and Development
15. SciELO: Scientific Electronic Library Online

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Abstract

Global trends are transforming nearly every sector, and the higher education sector is not an exception. Universities are synchronizing their curricula so that credits are transferrable and cumulative across countries. Governments are increasingly controlling the quality of education through new regulations. Universities are now competing globally and managerial methods derived from business are being introduced.

In South America, an increasing student population is demanding access to universities, while at the same time universities are facing a reduction in funding and more competition. The profile of students is shifting and demanding more flexible curricula along with double degree and continuing education programs.

All of these trends, together with government regulations passed in 1992, have caused major transformations in the Colombian higher education sector. Universities have been straining to remain competitive in this new environment and many have attempted to implement credit frameworks as a solution. However, such transformations are complex and require uncommon managerial competencies. Furthermore, very little research has been done to understand the real impact of these changes in Colombian Universities, and any studies done have not provided a full picture of what was really happening within the management of Colombian Universities.

Did universities fully understand the concept and complexity of implementing credit frameworks? What were the main drivers affecting the higher education sector in Colombia which catalysed the implementation of credit frameworks? Finally, what impact did this implementation have on university management? This research study attempted to answer these questions through an in-depth study of three representative universities. The results showed clear differences and also common understandings among universities and revealed key insights into university management. It is the hope of this research study that it may assist universities and policy makers in the on-going transformation of the Colombian higher education sector.

Chapter 1: Introduction

One of the key processes of change occurring in the Colombian higher education sector is the introduction of credit frameworks. This change is due, in particular, to the national quality assurance requirements in which credit frameworks have become one of the criteria used to measure quality, and the fact that credit frameworks are becoming an important element in order to take advantage of the process of internationalization (a growing university interest in Colombia). The purpose of this chapter is to introduce the concept of credit frameworks and the context in which this implementation is happening in Colombia. In addition, this chapter highlights the scope of this research and its main purposes and contribution to knowledge and to managerial practices.

Recent History of the Introduction of Credit Frameworks in the Colombian Higher Education System

The factors that affect the transformation of a country's higher education system are vast. Some of the most influential factors include economic, cultural, socio-political, and technological changes as well as external organisational pressures.

Talking about these external pressures, it can be said that international projects like the Latin American Tuning Project, INNOVA-CESAL, Project 6x4¹, and many others, following the Bologna Process, have forced paradigm shifts in the higher education system of Colombia, nation that is being viewed as a referent in Latin America (Zarur, 2008). All the above factors, coupled with a new constitution, and consequently new laws on higher education starting in 1992, have been responsible for transforming the landscape of higher education in Colombia. According to Restrepo (2006b), these changes have resulted in the implementation of new systems and processes.

One of the evident impacts in the Colombian higher education system has been the promulgation by the Ministry of Education of several decrees dealing with quality standards and making compulsory for all the universities the implementation of credit frameworks in all academic programs offered in the country.

Therefore, one of the most significant changes has been the implementation of credit frameworks, which are usually associated with flexibility and new labour market demands. These are impacting on Colombian universities in relation to their academic, curricular, pedagogical and managerial matters (Díaz, 2002). The origin of the concept of academic credits in Colombia comes from the Law 30/1992, which defined mechanisms to allow mobility and diploma recognition using a credit framework. This law is detailed in the Decree 808/2002 from the Ministry of Education, which states that the academic credit is a mechanism to promote quality, student transferability and inter-institutional cooperation.

One of the main prior discussions and theoretical explanations that led to the Decree in 2002 was the work conducted by the Instituto Colombiano de Fomento a la Educacion Superior (ICFES), which is an institute in charge of policies related to the improvement and assessment of higher education. This work introduced a discussion of the topic of credit frameworks in the higher education system in 2001 (Díaz 2002) in which many universities took part in workshops discussing credits and flexibility. The Director of ICFES presented the aforementioned discussion on credits and flexibility in 2001 – 2002, the same years in which the Decree was prepared and implemented, in this way:

¹ Latin American Tuning Project, INNOVA CESAL and Project 6x4 correspond to multi-institutional projects based on cooperative and transformational work among universities from Latin America and Europe in which Europe is transferring best practices from the Bologna Process including the implementation of the ECTS (European Credit and Transfer System) and the idea of implementing competencies within academic program's curricula.

The document proposes the need to create a new culture which allows the removal of institutional academic practices characterized by rigidity...and promote new forms of work like flexibility...this is the only way to promote a positive impact in the development of the country...In the same way, the document which we present today offers strategies devoted to the adoption of new forms of flexibility like the implementation of academic credits, education by cycles and other tools which look for the diversification in the academic supply, the growth in the access rate to the system and the promotion and facilitation of equivalences with other educational systems in the world...The proposals and reflections which are included in this book are part of the quality policy promoted by this government... (Díaz, 2002, pp. 10).

According to Díaz (2002), the main reasons for the introduction of credit frameworks in Colombia were associated with international forces coming from multinational organisations and international agreements, new educational requirements from the labour market, scientific factors associated with the new mode of knowledge production (Gibbons et al., 1994), technological factors which demand more flexibility, the growth and massification process in higher education, and a new interest in increasing access rates.

In 2003, with the Decree 2566 from the Ministry of Education, the credit discussion was conceptually transformed into an academic framework, which allowed flexibility as well as pedagogical and curricular transformation. A new Law on the topic confirmed this regulatory commandment in 2008: The Law 1188/2008 from the Ministry of Education.

Although some authors in Colombia (Borrero 2008, Batista, Giraldo, & Ochoa, 2008) have led discussions about academic credits, especially related to the United States higher education system, the current discussion about credits and flexibility in Colombia remains a relatively new academic debate and goes hand in hand with the discussion of quality in higher education (Restrepo, 2002), internationalisation, new access demands, new educational requirements and labour market expectations (Díaz, 2002).

Today, credit frameworks are seen in Colombia mostly in relation to curriculum restructuring, learning activities, and student autonomy, mobility and flexibility. However, often these changes have lacked clarity about the reason for implementation. Additionally, little information or preparation was given regarding the expected impact of these changes.

Since the official introduction of the credit frameworks in Colombia in 2002, there has not been a comprehensive study capable of identifying the systematic causes and consequences of the credit frameworks. Perhaps because of constantly changing demands in the higher education system, which require fast and deep transformations, there has not been time to look back and evaluate the credit framework in order to anticipate necessary future adjustments.

Based on the decrees presented above, today the national body of accreditation, Consejo Nacional de Acreditación (CNA), and the national body in charge of quality assurance, Consejo Nacional de Aseguramiento de la Calidad de la Educación Superior (CONACES), consider credit frameworks as high quality standards which are reviewed when a programme is obtaining quality accreditation and when the government is licensing new programmes (Restrepo, 2006b). Therefore, today in Colombia, credit frameworks have become a relevant issue, which should be studied in terms of attaining standards of quality and becoming a better university.

As can be seen, the change towards the implementation of credit frameworks plays an important role in the development of the Colombian higher education system, and recently also to some other Latin American countries which view Colombia as one of the more advanced countries regarding academic credit implementation (Restrepo, 2008) and which are implementing a similar system.

The Need for Comprehensive Studies on Credit Frameworks in Colombia

Only a handful of studies have been published in Colombia and Latin America related to credit frameworks. As Mora and Gallardo (2005) have indicated:

In the research about the implications of credits in University of Costa Rica it can be identified that credits have three functions: academic, financial and administrative...from the financial perspective the credit can be conceived as a baseline to define the fees...It has been proposed that Universidad de Costa Rica starts a deep analysis in the operation of credits and its implications...Although the internal decisions have been made since 1990, the deep analysis on the operation and implications of credits has not been done until now (Mora & Gallardo, 2005, pp. 15-19).

In the case of Colombia one study, as mentioned previously, theoretically introduced the topic before its implementation and therefore the expected impacts of credit frameworks were limited to theoretical and non-practical analysis (Díaz, 2002). The other published studies in the country include a group of four works whose findings were limited to a macro analysis at the national level (Universidad de los Andes, 2006; Escorcía, Gutierrez, & Henriquez, 2007; Londoño, 2004; Batista et al., 2008), and another one, which took into consideration three case studies (Palacio, Mancera, Guasca, Cruz, & Parra, 2006). However, this last study was limited only to the perceptions of the directors, students, and professors regarding topics like academic credits, curriculum flexibility, evaluation forms and implementation processes of academic credits. Although this study tried to deal with the topic of academic credits, the poor implementation of credit frameworks within the case studies included, the poor quality and representation of the cases along with an improper contextualisation of the topic, and the restricted cases selected², have led to incomplete, misleading, and inadequate conclusions. In the end, nothing was written specifically about causes and consequences in the implementation process of credit frameworks. The study lacked clarity and sometimes lacked a proper understanding of the concept of academic credits. In addition, the understanding (referents and causes) of the implementation of academic credits within universities in Colombia is restricted only to the Bologna Process with the implementation of the ECTS (European Credit Transfer and Accumulation System) and the influence from international agencies (IMF and World Bank) without analysing the complex process of change in the higher education sector in Colombia.

In the case of the rest of the world, the situation is not very different, although some researchers have partially approached the topic of credit frameworks. Cáceres and González (2005) completed a preliminary study in the case of Spain. Regel (1992) published a particular work about the consequences of the implementation of credit systems in Thailand, India, and Senegal and focused the analysis on the impact on access rates. Dixon (2009) did a recent work on credits in New Zealand focused on curricular accounting.

The result of very little relevant research is a process of complex change, which has not been studied properly in terms of its causes and consequences. This is the case in Colombia as well as in many other countries of the world that have possibly had an even worse experience in terms of managerial demands and changes due to credit frameworks. This research study aims to address this issue by providing a comprehensive and detailed study of the Colombian Higher Education System using university case studies.

The Importance of Studying Credit Frameworks together with University Management

The revolution in the higher education system due to the introduction of credit frameworks has brought about questions of how this framework is producing changes in terms of learning,

² Cases which do not represent polarized realities and are not representative of multiple universities.

curriculum, student performance, and quality of education, among others, and how the managerial model of Higher Education Institutions (HEIs) is prepared for the new scenario.

Although limited, much of the Colombian as well as the international literature on the topic have described the impact of credit frameworks and flexible curricula on the curriculum, learning experience, and student performance. On one hand, some of the literature specifically describes the curricular impacts. Karseth (2005), Winter (1996), Morris (2000), Van Eijl (1996), Bocock (1999), and Allen and Layer (1995) described how credit framework implementation has changed curriculum conception, curriculum structure, curriculum coherence, curriculum direct implementation, and curriculum evaluation procedures. On the other hand, some of the literature focuses more on the learning experience and student performance. Naidoo (2003), Naidoo and Jamieson (2005), Jenkins and Walker (1994), Heffernan (1973), Agelasto (1996), Bridges (2000), Miclea (2003), Avis (2000), Nash (1995), Van Eijl (1996), and Watson (1989) discussed the impact of credit frameworks on the nature, process, quality, and outcomes of learning. They also described the impact on the student identity, learner autonomy, the interest in and depth of learning, and the redefinition of teaching approaches. Again, in the case of Colombia, only a few studies have tackled this issue (Díaz, 2002; Toro, 2006).

Authors such as Naidoo (2003) and Heffernan (1973) have refereed to the North American literature dealing with consumerist attitudes in higher education and the impact on learning and the new pedagogical requirements. Some of the work relates growing consumerism with modularisation and credits and raises concerns such as

...modularisation and the constant pressure to offer students greater choice in line with market pressures (parts of the credit framework discourse) has transformed learning into a process of picking up, digesting and reproducing an unconnected series of short, neatly packaged segments of information, which may stunt students' intellectual development and affect their disposition and motivation towards lifelong learning (Naidoo, 2003, pp. 252-253).

Naidoo and Jamieson (2005, p. 4) introduced a study with similar conclusions which shed some light on the impact of consumerism (which may include the introduction of credit frameworks³) on learning, teaching, academic identity, assessment and pedagogy. In the case of Colombia, Díaz (2002) also introduced possible impacts of credit frameworks and flexibility in the curriculum structure, in the academic organization, and in pedagogical aspects. However, Díaz introduced these theoretically and not in relation to any specific case study.

Other works have studied the impact of curriculum transformations in relationship to learning as well as professional and student identity and quality (King, 1999; Bocock, 1999; Winter, 1996; Jenkins & Walker, 1994; Watson, 1989; Agelasto, 1996; Heffernan, 1973). One of these studies resulted in some very critical interpretations:

In addition to educational objections to a wide range of choice, on which grounds modular courses are often accused of being pick and mix or cafeteria style courses, lacking coherence and progression when measured...critics can point to circumstances where flexibility can be more apparent than real (Watson, 1989, pp. 5).

The authors argue against many of the expected benefits of implementing credit frameworks such as flexibility and economies of scale. They provide a number of disadvantages of credit frameworks including the complex demands on administration and assessments and difficulties with large groups of students in each subject. They also mention challenges with progressive assessment, since students make choices based on tactical reasons rather than studied choices according to learning expectations. Furthermore, they discuss difficulties with public

³ In fact, Naidoo and Jamieson included as levers of consumerism the “*modularisation of the curriculum and the assignment of uniform levels and credits to courses to facilitate choice*” (p.4), which can be described as key elements of the credit frameworks.

recognition and understanding because labour markets and employers tend to be confused with the implementation of flexibility, modules, and credit frameworks. Finally, other kinds of works relate to specific impacts, like the ones of Trowler (1998a) and Jary & Parker (1994). They studied the impact of credit frameworks on academic attitudes, academic values, academic work, and how academics respond to the system and to the demands on student active learning.

Still, very few studies have dealt with the relationship between credit frameworks and university management, which is the main issue studied in this thesis. In other words, this thesis tries to analyse how credit frameworks and university management co-constitute both causes and consequences of a process of change which is happening in the system. Some of the traditional literature regarding credit frameworks coming from the United States has identified the expected impact of credits on management. Heffernan (1973), in particular, stated that credits have been a way to link the educational part of higher education with administrative, infrastructural, and financial issues. Borrero (2008) wrote about credits in the history of the United States' higher education system and claimed that credits imply flexible regimes of university management. Unfortunately he did not provide a more detailed description of these flexible regimes. Additionally, these studies are dated and did not provide the deep and accurate understanding required.

Many of the recent works on the sociology of higher education are giving importance to the way external pressures exert impact on management and administration in higher education (Naidoo 2003; Gleeson & Shain, 1999; Marginson & Considine, 2000b). However, less importance is being given to the impact on management coming from forces of commodification (Naidoo, 2003; Naidoo & Jamieson, 2005), such as the appearance of the credit frameworks discourse, which relegates academic practices and their managerial causes and consequences to a black box (Naidoo & Jamieson, 2005).

Furthermore, Betts and Smith (1998) claim that the lack of studies on the relationship between credit frameworks and management is leading to serious problems when implementing credit frameworks, and in many cases, management changes are not well developed and that we cannot underestimate the major impact in management that credit frameworks could have.

Many of the dilemmas now faced in Credit-Based modular systems institutions derive from the failure to appreciate the extent to which credit-based modular systems and its underpinning philosophy represents radical change which requires sophisticated change management. However, the reality has been drip fed development and crisis management. This mismatch and clash between the still predominant old culture and the attitudinal changes require...effective strategies to enable transition...The move towards credit based modular systems requires changes in organizational systems, procedures and frameworks. Most importantly, it requires changes in organizational and national culture... We must not underestimate the radical change that this represents. We must prepare for the impact on resource management, staffing, employment contracts, facilities management, student recruitment, guidance, support and whole range of related matters (Betts & Smith, 1998, pp. 4-6).

Continuing with the topic of the relationship between credit frameworks and university management, other works touch this topic tangentially by relying on responses of academics to the implementation of credit frameworks (Trowler, 1998a). Other works discuss managerial impacts in relationship to credits, modules and flexibility. However, these works lack the deep understanding required when approaching these topics. For example, these works do not provide a theoretical explanation of the relationship nor do they offer an understanding of credits and flexibility (Watson, 1989; Allen & Layer, 1995; Agelasto, 1996; Mason et al., 2001; Betts & Smith, 1998).

Perhaps one of the most developed works (although not specific to Colombia) and the work closest to exploring the relationship between credit frameworks and management has been conducted by Trowler (1998b), who describes unexpected, unintended, and unwanted outcomes

from the implementation of credit frameworks based on managerialist theoretical approaches. Trowler's work goes further to explore not only the unintended changes, but also the actual process of change, avoiding the managerialist theoretical approach as being the unique approach. As a criticism, he confines the study just to the academic responses to change without exploring other participants, actors, and cultural implications.

What is clear is that management seems to be an important topic when considering the implementation of credit frameworks, and that it is critical to study this relationship in detail (Robertson, 1994; Betts & Smith, 1998).

Noting the reservations of some academic staff and the enthusiasm of many students, we are clear that most institutions can now call upon sufficient support amongst academic and administrative staff to carry forward the comprehensive development of credit systems...The most critical factor now affecting purposeful progress is the existence of sustained commitment and support from institutional management (Robertson, 1994, pp. 14).

Practical conclusions on this topic come from the experience of the European implementation of the ECTS (Haug & Tauch, 2001; Reichert & Tauch, 2003; Crosier, Purser, & Smidt, 2007).

The strong move towards ECTS as a common reference in European higher education is a signal of the broad agreement, which exists on its aims and general principles. As it becomes more widespread there is a growing concern in several countries that inconsistencies in its implementation might inhibit or undermine its potential as a common denominator (Haug & Tauch, 2001, pp. 53).

This example presents a clear need for further in-depth exploration of institutional matters in management when implementing credit frameworks. This research study aims to provide such in-depth research and help avoid these types of problems, which the implementers of ECTS have identified in their process in Europe.

In Colombia's case, Díaz (2002) theoretically anticipated the credit framework impact on university administrative matters. Ten years ago, he had recommended the topic as a future line of research, especially the topic of evaluating the actual managerial impact of flexibility and credit frameworks. He stated the following:

...the study of administrative flexibility is big and complex, because management is a very specialized topic which is the confluence of social psychology, management technologies, new IT developments and new forms of management and government...Therefore its treatment in this work is just introductory and it can be considered as an invitation to debate the problem which has strong implications in the life of higher education institutions (Díaz, 2002, pp. 109).

More than ten years later, nothing has been written on the topic and no information has been given about best practices implementing credit frameworks and its impact on university management. Therefore, a key factor in the quality assurance model of higher education in Colombia and an important topic in the internationalisation process remains obscure. As a result, in Colombia's case, this relationship between credit frameworks and university management seems to be a great opportunity for further exploration and a chance to shed new light on the higher education system and the higher education management theories.

Finally, this study could be of particular importance in assisting directors and other professionals in institutions of higher education (Restrepo, 2006c). It can help universities in Colombia when implementing credit frameworks or even when implementing changes in managerial matters. This research can help universities avoid difficulties due to a lack of information on the process of change needed to implement credit frameworks. It can help universities avoid trial and-error models of implementing credit frameworks, which make the

process more complex and expensive. Therefore, this research study will include advice for professional practice in the Colombian higher education sector, offering insights into best and worst managerial practices for university administrators. Although findings from this study are extracted from the Colombian higher education system, the advice may prove relevant for many other countries, especially in Latin America, where credit frameworks are part of the agenda of change in the higher education sector.

A brief description of this work

In conclusion this work understands that new global trends in higher education as well as government regulations that have passed in the 90s in Colombia, have caused major transformations in the higher education sector. Universities have been straining to remain competitive in this new environment and many have attempted to implement credit frameworks as a solution. However, such transformations are complex and require uncommon managerial competencies. Furthermore, very little research has been done to understand the real impact of these changes in Colombian Universities, and any studies done have not provided a full picture of what was really happening within the management of Colombian Universities.

Therefore, the main purpose of this research is to answer the following questions: How do universities in Colombia understand the concept and purposes of credit frameworks? What were the drivers that catalysed the introduction of credit frameworks? And finally, what impact did this implementation have on university management?

To answer those questions Chapter 2 will undertake an in-depth analysis of the international and Colombian literature to understand various conceptions of credit frameworks together with drivers and intended purposes of credit frameworks. Then in Chapter 3 it will discuss the conceptual framing used in the thesis. In chapter 4 the research approach and design will be presented. Finally in Chapters 5 and 6 results will be presented initially for each individual case study institution and then through a cross-case analysis. At the end, Chapter 7 will deal with the conclusions of the thesis and the personal journey of the author in undertaking this research.

Chapter 2: Credit Frameworks: A Review of Definitions, Drivers and Purposes

This chapter aims to provide a review of the literature on the concept of credit frameworks. It begins by looking at various definitions and understanding before focussing on some of the drivers of credit frameworks globally as well as in Colombia and the uses and purposes of credit frameworks.

Definitions and Understandings

The original idea of credits was introduced in 1869 at Harvard University. It started with the introduction of the elective system according to the ideas of President Charles Elliot, and its main purposes included greater breadth, flexibility, possible quantification of the educational process, and opportunity for individual choice (Heffernan, 1973).

As can be seen, (Restrepo 2008) most descriptions of credit frameworks have three main flaws: they confuse the term with flexibility, flexibility of learning, flexibility of delivery, or flexibility of provision; or, they confine the concept to a very restrictive quantitative instrumental definition; or, in other cases, without the proper analysis, the definitions conclude with non-critical justifications, overestimating the impact and the real power of change (Cloonan, 2004).

One of the instrumental views about credit frameworks is the one described by Trowler (1998a; 1998b; 2001) and Beneitone (2008b) for whom it means:

...those aspects of the higher education curriculum facilitated by giving credit value to assessed learning. These include modularity, the semester system, franchising, and accreditation of work-based learning and of prior learning (Trowler, 1998a, p. 4)

These sorts of definitions merely define a group of practical changes derived from the value given to assessed learning. It is focused on the instrumental possibilities and a more or less mechanical valuation of learning via credits. It is a partially useful definition, which can closely be related to a banking system. *“The assignment of credit to assessed learning enables part-time students in particular to bank their credits so that they can cash them in when they are ready...”* (Trowler, 1998a, p. 8). Other simple definitions are expressed by Tait (2003), for whom credits are an award given to a learner who achieved a learning outcome, and credit frameworks are a *“set of minimal specifications for measuring, describing, valuing and comparing achievement in a common way”* (Tait, 2003, p. 3). According to Tait, credit frameworks end up being an aggregation of specifications leading to a very limited instrumental definition.

Instrumental definitions of credit frameworks are very similar to political understandings of them, which see credits as a tool to introduce national or multinational ideas. That has been the case coming from many of the works related to the Bologna Process, either in favour of or against credit frameworks. In particular, the ideas concerning the best way to implement the credit frameworks were expressed from a political perspective (Hawes & Donoso, 2003; Bekhradnia, 2004), which usually ended up in very instrumental ways to implement the system.

Credits are quite simply a mean of attaching relative values to the different components of a course. They are a currency of learning (Bekhradnia, 2004, pp. 5-6).

Another very popular definition of credit frameworks defines them as a form of currency of learning using a quantitative approach (Bridges, 2000; Bekhradnia, 2004, Regel, 1992).

Credit is a form of currency, which enables us to express in quantitative terms the relative extent and depth of learning achieved by an individual...The credit provides a basis for establishing equivalence between different modules and programmes and, in terms of academic recognition... (Bridges, 2000, p. 257).

In the case of Latin America and Colombia, similar quantitative interpretations of credits can be extracted from the literature (Universidad de los Andes, 2006; Mora & Gallardo, 2005; Palacio et al., 2006), including the way in which the Minister of Education describes the system of credits. According to the historical and traditional understanding of academic credits in the North American higher education system (Borrero, 2008), very quantitative ideas of credits can also be found. Heffernan (1973), for example, sees credits as a way to measure the service given by teachers, the units of education taken by students, the cost of teachers, and the value of learning. According to Heffernan, credits are “*the instructional unit for expressing quantitatively the time required for satisfactory mastery of a course of one class hour per week per term...a measure expressing the extent of content in a course, as well as quantitative requirements for a degree...*” (Heffernan, 1973, pp. 65-66). Seen in this way, it is very easy to be critical of credit frameworks and misunderstand the concept because education is seen in an extremely mechanical and superficial way. This particular kind of interpretation has introduced historical debates about credit frameworks and their undesired impacts in learning (Borrero, 2008, p. 24). Similar reactions against the system can be extracted from Flexner (1930), Bereday (1973), Wain (2004), and Smith (2006).

Regarding critical interpretations of credit systems, it is important to introduce the idea presented by Miller (1990), who sees credits as a way to introduce a distributive system according to which the students end up in a:

...cafeteria line where one can enter at any point, choose foods that satisfy basic hunger as well as a dash of dessert or anything else that strikes an individual's whim, but without guidance about those foods that are necessary for a balanced diet (Miller, 1990, p. 126).

Miller argues that this happens because the credit framework is usually politically imposed from above and tends to answer to external pressures without any control and evaluation. Some other more extreme interpretations claim that credit frameworks are part of the new liberal discourse and are a way to control developing countries by developed ones (Díaz, 2003). Another political idea sees credit frameworks as an ideal individualistic model based on freedom, in which individual needs are satisfied to the extreme. All of these extreme positions tend to oversimplify the real impact and role of credit frameworks.

The other misuse of the term credit frameworks is due to confusion. For example, some of the traditional interpretations of credit frameworks are practically the same as the idea of modularization (Watson, 1989). Young (1995) implies that credit frameworks can be defined as the breaking up of the curriculum into discrete and relatively short learning experiences, and finally an instrumental representation of modules. Allen and Layer (1995) and Betts & Smith (1998) discuss this confusion and give theoretical differences between both concepts (modularization and credit frameworks), providing a broader understanding of credit frameworks, although they both end up being described as

...tools with the capacity for delivering learning in a more flexible way...they are complementary and compatible...but both are just tools which can be used in different ways, jointly or separately, for different purposes...in practice modularity and credit get confused and conflated as institutions struggle to introduce and develop them (Allen & Layer, 1995, p. 27).

Differences are important in order to understand why particular changes are being implemented due to either or both credit frameworks and modularization. In addition, the authors bring up

another concept, semesterisation, which can also be confused with credit frameworks. The conclusion is that any concepts defined by the authors as tools or instruments state that learning can be built from blocks and can be given a value. Understood in this way, credit frameworks are nothing more than instruments or tools that give value and measure to any learning.

This study avoids such oversimplifications of the concept of credit frameworks and attempts to present a more comprehensive definition. Drawing from my previous work, for this research I wish to employ a more precise definition of credit frameworks. The definition should include radical changes in curriculum design, educational structure and content, provision (delivery) of education, the learning process and its assessment rationale. These changes are achieved by building a particular form to codify, quantify, stratify, structure, and convey information in non-academic language for comparability, equivalence, mobility, recognition, transfer, accumulation and quality (Restrepo (2008)). In the next section I will turn to some of the key drivers for the rise of credit framework systems globally as well as in Colombia and Latin America.

Key drivers for the rise of credit frameworks

Without any doubt, the world of higher education is experiencing scenarios of change, which, in many cases, can be associated with well-known and universally recognised macro trends in higher education. Those trends have especially impacted on the higher education sector in Colombia with relevant transformations in university management and their strategic orientation.

One of the key processes of change in the world is globalisation. Markets and societies which have become interconnected, as well as more technological connectivity and simpler approaches to communication, have brought to the scenario of higher education new opportunities and challenges. Nowadays it is very common to have access to academic production from around the world as well to build international academic relationships. All of these have created a knowledge society and economy in which higher education has become a must.

This scenario has opened to societies the importance and need for access to higher education. The result is a move from traditional “elite” systems to a more massified system, in which both the public and the private sector are growing in supply and demand. Combined, these processes of growth, along with other social demands of the public sector, have brought problems of public funding to the higher education sector, as well as more market competition in the private sector.

In this new scenario of resource or market competition in higher education, being relevant and being accountable become key issues. Relevance is associated with the way education is provided (teacher/student learning process) and how it is linked with the needs of society, while accountability brings about the need of quality assurance models and indicators.

In terms of the curriculum, credit frameworks become the way to implement this process of global change. The use of credit frameworks represents a way to internationalise the academic programmes, to give more relevance and academic quality to them, to attain more market attractiveness and even to ameliorate funding troubles through economies of scale. In this section I will look in detail at some of the drivers that have influenced the rise of credit frameworks.

Globalisation

Globalisation must be recognised as one of the most important of these drivers. However, there are many definitions of globalisation (Deem, 2001; Marginson, 2000a; Becher & Trowler, 2001; Wilkinson, 2006; ASCUN, 2007; Madera, 2005; Torres & Schugurensky, 2002; Schapper &

Mayson, 2004; Dale, 1999; Tünnermann, 2003; Dale, 2000; Marginson & Van Der Wende, 2006; Maassen & Cloete, 2002; Lauder, Brown, Dilabough, & Halsey, 2006; Kaak, 2000; Muller, 2000b; Marginson, 2004). It can also be said that the way globalisation is understood and implemented⁴ is not the same across countries, not only in terms of policies but also in terms of mechanisms to be delivered (Marginson & Van Der Wende, 2006; Dale, 1999).

An understanding of globalisation must include topics like: the appearance of an international market of goods and services, the transition from regional, local or national economies to global economies, the developments of ICT (Information and Communication Technologies) in order to improve connectivity and availability of information (Marginson, 2004; Becher & Trowler, 2001), the liberalization of financial and human flows, the appearance of a more intensive cross-regional and cross-national interaction, the importance given to environmental topics, changes in the demographic universal pattern, the importance given to knowledge, science and technology, the increase of travels due to educational opportunities, the importance given to networks, and worldwide relationships between people and countries.

What is clear in this new scenario of globalisation is that higher education is transformed. Therefore, the process of globalisation in higher education is leading to ideas such as the global knowledge economy or the knowledge society. Globalisation is clearly transforming much of the economic, political (Dale, 2000; Marginson & Rhoades, 2002; Marginson & Van Der Wende, 2006) educational, and cultural context, and what we now know.

Regarding the higher education sector, Deem (2001), Torres and Schugurensky (2002), Brown, Halsey, Lauder, and Stuar (1997), Dale (2000), Marginson and Rhoades (2002), Marginson and Van Der Wende (2006), Kraak (2000), and Del Bello & Mundet (2001), all claim that globalisation can be related to many changes in terms of the formation of a global market in high value scientific labour, an impressive growth in programme offerings (expansion and diversity in the delivery of programmes), new funding regimes, significant increases in students going to university (massification), shifts in the relationship between governments and universities, changes in the institutional organisation, growth in continuing education, devolution of educational decision-making, cultural changes, processes of convergence and integration, interest in international mobility, global comparisons (such as benchmarking and rankings), use of information and technology communication systems, preoccupation with life-long learning, attempts to distinguish between academic and vocational education, and new forms of educational provision. Globalisation is indeed leading to a process of change in curricula (Waks, 2006).

I will be using the term globalization as a carry-all term referring to an interacting complex of forces including a) an economic dimension...b) a technological dimension...These changes, I will argue, constitute powerful forces for curriculum change (Waks, 2006, pp. 836-837).

This curricular change due to globalisation includes the introduction of credit frameworks. In fact, Wilkinson (2006), Del Bello and Mundet (2001), Edwards, Nicoll, and Tate (1999), Marginson and Van Der Wende (2006), Marginson (2000a), and Ensor (2002) state that globalisation coupled with flexible delivery in higher education are creating major changes within HEIs and are leading to the introduction of systems like credit frameworks. Ensor (2002) and Kraak (2000) go further, concluding that credit frameworks seem to be the more appropriate response of higher education to globalisation,

⁴ In fact, Marginson & Van Der Wende (2006) also concluded that globalisation is not a universal phenomenon at the institutional level. *"It is nuanced according to locality (local area, nation, world region), language of use and academic cultures; and it plays out very differently according to the type of institution"* (p. 4).

...according to sponsors of the credit accumulation and transfer approach, globalisation and democratisation impact in particular ways on higher education curriculum and pedagogy, and on research. Higher education curricula, the argument goes, should reflect a shift from course to credits, from year-long courses to modules (Ensor, 2002, p. 276).

Kraak (2000), in particular, states that globalisation and massification in higher education are both leading to new curricular forms including the adoption of credit frameworks and new structures adopted to implement that credit system. This also implies changes like the transition from subject-based teaching to student-based learning, from discipline-based departments to looser frameworks, and from knowledge to competencies. An example of how this process of globalisation is linked to curriculum transformations can be extracted from CINDA (Centro Interuniversitario de Desarrollo) (2007)⁵, which states that there is a growing concern in Latin America and Spain of building the Iberoamerican space of higher education. Some of the main declarations regarding this idea are the Bariloche Declaration of 1995, which says that universities, *“have today two challenges: the structural and curricular modernization and the need to adapt to the new society demands...It highlights the need for promotion of student and professor mobility programs”* (CINDA, 2007, p. 22). Following the San Jose Declaration of 2004 and the Montevideo Declaration of 2006, one of the changes recommended by the San Jose Declaration was the introduction of credit frameworks.

One of the key aspects when considering flexibility and changes within higher education due to globalisation is the shift described by Karseth (2005), which says that the higher education system is moving to student-centred learning approaches from the traditional teacher-centred approach. Therefore, there is a stronger focus on the individual learner or student who is becoming a consumer of the higher education system rather than a participant. In other words, it is leading to a consumerist environment within the higher education system that leads to the commodification and marketization of higher education (Trowler, 1998a; Trowler, 1998b). Biesta (2004) even describes this new process of education as an economic transaction where the learner is a consumer, the teacher or the HEI a provider, and the education a commodity to be delivered.

Based on the context of quasi-markets and the new managerial regulatory frameworks,⁶ Naidoo (2003), Ferlie (1992) and Naidoo and Jamieson (2005) describe the clear impact of consumerism on learning and teaching in higher education and on the delivery of academic programmes. One of the tools to impact learning and teaching has been the introduction of credit frameworks.⁷ *“Various consumerist levers to enhance student choice and control over the education process have been introduced or strengthened...Examples of such levers include the modularisation of the curriculum and the assignment of uniform levels and credits to facilitate choice⁸...”* (Middleton, 2000, as cited by Naidoo, 2005, p. 4). They also state other impacts of consumerism: the new importance given to external demands on the curriculum, the introduction of acceptable standards of student achievement, the pressure on academics to become more concerned about external demands, the requirement that universities publish detailed information about the programs (transparency), the use of performance indicators at the institutional level, the strengthening of consumer rights (use of surveys, complaint mechanisms), and the introduction of new pedagogic strategies. All of this is transforming students into consumers and teachers and institutions into providers.

⁵ CINDA is one of the most prestigious and renowned organizations in Latin America working on issues in the higher education sector including topics like challenges and opportunities in university management

⁶ This new context is exactly described in this way in the Higher Education System in Deem (1998, pp. 48-54).

⁷ Similar ideas come from Agelasto (1996), according to whom credit systems allow students to tailor their own program, according to their own individual needs.

⁸ In this case, both things, the modularisation process and giving value in credits to assessed learning, can be understood as part of the “Credit Frameworks.”

According to Naidoo (2007), Naidoo and Jamieson (2005), and Clarke and Newman (1997), consumerism, in higher education and in general in public services, is part of the change towards a new scenario in which market mechanisms and New Managerialism are introduced. Consumerism includes the use of external and internal competition mechanisms for limited resources looking for more efficiency, effectiveness, and equity within each institution and in the whole market of HEIs. It also includes the search for more diversity and flexibility. Consumerism implies (as New Managerialism) the use of performance indicators and league tables that are usually implemented to give more information to the society (consumers). Finally, consumerism means attention will be given to aspects like choice, access, and information. Importance is given to users (Clarke & Newman, 1997; Riesman, 1980) and all of these factors are relevant when introducing flexibility and credit frameworks (Mason, et al., 2001). New possibilities of choice in the delivery of academic programs, new and flexible opportunities of access to the higher education system, more information given to the student, and students taking an active part in the service provision are also considerations in flexibility and credit frameworks. *“The rationale for increasing the flexibility of the provision of higher education...rests upon four main imperatives: 1. The changing client base for higher education...4. The impossibility of cost effectively meeting massively growing client demand”* (Ling et al., 2001, p. 9).

In the case of Latin America, including the Caribbean, Brunner (2002b) and López Segrera (2002) describe in detail the profound changes due to globalisation during the last two decades, without providing globalisation as the main reason for all the aspects that have changed higher education.

Internationalisation

The second key driver that can explain the introduction of credit frameworks is internationalisation. There are also many definitions of internationalisation, but they seem to share the following similar aspects (Deem, 2001; Madera, 2005; Van Damme, 2001; Schapper & Mayson, 2004; Tünnermann, 2003; Van Der Wende, 2006; Shailer, 2006): the possibility to share ideas, knowledge, and best practices (Deem 2001), multilateral agreements to extend frontiers in higher education or cross-border mobility of professors and students (Van Damme, 2001), or interactions and relationships among cultures and entities (Schapper & Mayson, 2004). Thus, in the case of higher education, internationalisation can affect factors such as the curriculum (Knight, 2002; Uribe, 2008), quality, funding, cost-effectiveness, quality assurance in teaching and research, and institutional development. Furthermore, internationalisation in higher education can be linked to transformations in teaching, learning (Shailer, 2006), and curriculum design in the direction of a student-centred kind of education, and usually including an international or intercultural dimension in teaching, research, and community services (Beneitone, 2008a; Uribe, 2008; Knight, 2002).

One of the main objectives in the majority of the curriculum internationalisation processes has been the introduction and implementation of credit frameworks (Madera, 2005; Van Damme, 2001; Beneitone, 2008a), which is a way to link programmes and higher education systems and to pave the way for mutual recognition agreements.

Latin America too has been influenced by pressures for internationalisation (Uribe, 2007; Escorcia et al., 2007; Zarur, 2008; Díaz, 2002) and actually this trend is leading the region to introduce flexibility within the higher education system.

Today, the higher education systems in Latin America are suffering a real shock due to an internationalisation process...Directly and indirectly internationalisation is promoting: student mobility as one of the key dynamics in the knowledge society; the

establishment of quality academic standards in higher education; the pressure of new local and global concerns about relevance; and the definition of global links of educational processes and programmes...This new context is promoting education via flexibility and the renewal of higher education systems... (IESALC, 2006, p. 13).

There are many examples of the process of internationalisation in Latin America⁹. One of these is the implementation in Latin America of the Tuning Project (Beneitone, 2007; Escorcia et al., 2007), which defines common competencies and a common system of credits (based on competencies) for many university programs in the region who are looking for a qualifications framework. Recently, this project had an important impact in the higher education system in Latin America (Mora & Gallardo, 2005; Beneitone 2007). This project learned from the European experience and particularly from the design and implementation of the ECTS, which came about following the Bologna Conference of National Authorities in 1999. One of the main aspects in the design of the European space of higher education was the introduction of the ECTS in order to build equivalence and flexibility among the different higher education systems. A similar project, which was recently completed in Latin America, is the 6x4 Project (Escorcia et al., 2007) which launched in 2005 looking for *“the development of equivalence systems in terms of evaluation and learning outcomes in terms of competencies; the strengthening of relevance and the relationship between university and the society...(and) the development of common qualification frameworks in order to improve mobility...”* (IESALC 2006 p.31). One of the conclusions that can be derived from these projects is that internationalisation can be seen as a way to improve mobility in higher education, and therefore, it has close links with flexible curricula and the implementation of credit frameworks (Del Bello & Mundet, 2001; Beneitone 2008a). Other mechanisms of globalisation or internationalisation related to higher education and particularly the implementation of credit frameworks are harmonization and standardisation (Dale, 1999; Beneitone, 2008a). They imply collective agreements in higher education in which national policies become regional, and they imply the existence of worldwide models in higher education, which are propagated by associations or cultural processes. The Tuning Project and the 6x4 Project are examples of these, and the 6x4 Project led to a formal declaration by IESALC-UNESCO¹⁰ in 2006, to adopt credit frameworks in Latin America, and also the possibility to adopt a Diploma Supplement (Zarur, 2008).

Quality assurance

The third driver experienced by the higher education sector is perhaps the key one in Latin America associated to the implementation of credit frameworks. This driver has implied in Latin America the introduction of new processes of evaluation and quality assurance, which are usually implemented by national agencies (IESALC, 2006; Fernández, 2007; Schwartzman, 1993; López Segrera, 2002; Tünnermann, 2002). In addition, the government has become more concerned with supervision, control, and inspection mechanisms in higher education. In Latin America, quality concerns appear due to (IESALC, 2006, p. 34) the massification process and worries derived from it, the diversity that now can be found in HEIs, the dispersion of higher education information, the legal concern about education as a society right, the concern about the accountability of the higher education system, the scarcity of funding which increases the need for tools to beat competition, and the trend of internationalisation. *“That is why, worries about quality is a common denominator in Latin America. Although, the consolidations of the quality assurance systems are still insufficient...”* (IESALC, 2006, p. 34). The case of Colombia is not different from this regional trend (De Pietro-Jurand & Lemaitre, 2002; Lucio & Serrano, 1993; MEN, 2008). In fact, the Colombian government is one of the countries more

⁹ Examples include ALFA projects among Latin American and Caribbean Universities with European Universities, Mobility Programmes like PIMA, ERASUMUS MUNDUS, among others; a growing number of associations of universities regarding research, teaching, and community services (COLUMBUS, AUIP, etc); and many other efforts to promote relationships between universities in order to share best practices.

¹⁰ IEASLC corresponds to the delegation of UNESCO in Latin America and the Caribbean.

developed in the region in terms of a quality assurance system apart from the introduction of new policies in the direction of improving and promoting quality within the HEIs.

This quality assurance system includes the definition of institutional and programme quality standards, the compulsory implementation of credit frameworks (Isaza, Perez-Olmos, Martinez, Velásquez, & Mercado, 2006), the implementation of evaluation processes in order to obtain national accreditation¹¹, the access to information from the sector and its analysis, the appearance of national evaluations for undergraduate students at the end of each programme,¹² and the possibility to ask HEIs to implement improvement plans after a visit of quality assurance and quality evaluation. In addition, this process of quality assurance is completed with the development of information systems trying to bring transparency and solve asymmetric information problems in the higher education sector (Botero, 2005). All of these new mechanisms to improve quality are helping to introduce concepts like curriculum flexibility, learning outcomes, qualification frameworks, credit frameworks and many other related aspects as the key standards of the quality evaluation itself.

Although much has been written about credit frameworks as a way to improve the quality of higher education, it also has to be said that many authors have written about the unexpected impact of credit frameworks in the achievement of higher standards of quality. Some of them talk about non ideal impacts like the loss of coherence and inductive mechanisms in the curriculum structure (Naidoo et al., 2005), loss of conceptual skills when giving excessive importance to applied knowledge in learning, (Muller & Subotzky, 2001) and mushrooming of programs not linked with complex intellectual work (Muller & Subotzky, 2001; Young 2003).

Market competition and marketization

A fourth matter concerning change in higher education is the introduction of market competition in many areas of the educational sector (Brown, Halsey, Lauder, & Stuart, 1997; Deem, 1998; Dale, 1997; Amaral et al., 2003; Marginson & Rhoades, 2002; Gortnitzka et al., 2007b; Kraak, 2000; Subotzky, 2000; Marginson, 2004; Brunner, 2006). This process of marketization in higher education is leading to some expected implications as well as sometimes undesired consequences (Kraak, 2000; Subotzky, 2000) like the commodification of knowledge, the massification of higher education (Brunner, 2006), closer partnerships with outside clients and knowledge producers, new funding sources, emphasis on applied research, technology transfer through business-university research, and a new managerial culture and ethos in governance, leadership, and planning. The literature provides two reasons for marketization occurring in the higher education sector: on one side are the funding challenges faced by many HEIs in a context of massification and quality demands (Brunner, 2006), and on the other side is an ideological explanation in which basic ideological principles of the relationship between state and higher education are changing.

Marketization is also occurring specifically in Latin America. (Brunner, 2006; Dale, 1997) Brunner highlights how there is a change in higher education since there appear some forces that make universities compete for students, academics and reputation leading to a market-based environment in the sector (Brunner, 2006, pp. 1). Some of this competition might be explained by the idea that knowledge is now exchangeable and can be transacted in the market. This reality of the market plus new government policy and the funding regimes of HEIs is creating pressure to “*do more work but with fewer resources*” (Deem, 1998, p.48).

¹¹ In the case of Colombia, the high standards of quality are led by the National Accreditation Council (Consejo Nacional de Acreditación- CAN)

¹² SABER PRO-ECAES (Quality national examinations of higher education) which are designed for the different undergraduate programs in Colombia.

In a way, the credit framework can be seen as a way to solve this situation because it is a form to control and regulate the academic work and how the staff and students do the academic work. In addition, the credit framework allows the possibility to accumulate and transfer the knowledge already acquired and permit the portability of knowledge. As an example, Rustin (1994) introduces how changes, like the introduction of credit frameworks for accumulation and transfer, result from changes in higher education that are related to marketization. Marketization is also linked with the reduction in funding, more competition between institutions, new regulatory systems, and the introduction of managerial methods derived from business. This new reality of the market is creating a tendency towards massification in higher education.

Reduction of funding

Another fact faced by universities in Latin America is the reduction of funding. Confronting all of the Latin American countries are serious problems of fiscal deficits and public expense restrictions and the higher education sector is one of the most affected (Brunner, 2002a; Schwartzman, 1993; Tünnermann, 2002; CINDA, 2007).

The current policy problems for higher education (in Latin America) can be summarized in three: given its current size and composition, how can higher education continue to be financed, in a context of dwindling public resources and relenting pressures for higher expenditures and increasing costs... (Schwartzman, 1993, p. 14).

For many countries, the introduction of credit frameworks and curriculum flexibility can be seen as a response to the reduction of sources of income (problems of funding) in higher education and a way for governments to continue asking universities for increasing access rates and efficiency without having to provide the same amount of funding.

Growth in the higher education sector

Another driver to be considered in Latin America is the phenomenon of growth in the higher education system, interpreted by many people as massification (Becher & Trowler, 2001; García, 2003; Brunner, 2002a; Tünnermann, 2002; Tünnermann, 2003; Díaz, 2002), which has transformed the higher education system quantitatively and qualitatively. Reasons for this change include not only more interest in higher education, but also the creation of new demand via mature students, double degree students, and students from continuing education programs. In Colombia, data confirms a rapid growth in the access rate to higher education. A similar situation exists in many other Latin American countries (Kent, 1997; García, 2003; IESALC, 2006; Brunner, 2002a; De Pietro-Jurand & Lemaitre, 2002; López Segrera, 2002; CINDA, 2007; Uribe, 2008) as well as countries from the developed world. *“This growing interest in studying in the higher education system...contributes to the development of new pedagogic modalities...(and) more flexibility within the curricular structures”* (IESALC, 2006, p. 14). The access rate of higher education in Colombia has increased from 20,8% in 2002 to more than 40% in 2013 (ASCUN, 2007; MEN, 2008; MEN, 2011)¹³. Reasons for this are the rate of population growth, the continuous process of urbanization and rural migration to the cities (Uribe, 2008), increasing integration of women into the higher education system, and a renewed political concern about the importance of increasing the higher education access rates.

For many authors, the introduction of credit frameworks and flexibility is a response to the massification process in higher education and the increasing number of students combined with

¹³ There is Data in 2013 from the Ministry of Education in Colombia which confirms an access rate of around 42% in the higher education sector.

serious deficiencies in funding (Trowler, 1998a; Trowler, 1998b; Rustin, 1994, Allen & Layer, 1995; Bondeson, 1977; Williams, 2002; IESALC, 2006; Díaz, 2002). Trowler has stated that:

...the steadily declining unit of resource in the context of a push towards a mass higher education system thereafter, it was clear that new, more economical and efficient methods of delivery were required, and modularity, together with other aspects of the credit framework, appeared to offer this (Trowler, 1998a, p. 6).

Another benefit was the ability of credit frameworks to give the students different possibilities to study according to his or her preferred time, place and pace (according to the flexible model proposed by credit frameworks). On the positive side, sometimes changes like the introduction of credit frameworks can be seen as a way to avoid new forms of exclusion and elitism in higher education. Naidoo (2003) and Naidoo and Jamieson (2005) describe this in a very interesting way:

In the process of analysing the effects of commodification on higher education (in a way related to the introduction of credit frameworks), sociologists need to ensure that analysis is not based on idealised conceptions of a mythical golden past in higher education...Higher Education has been judged to be reproductive and exclusionary and mechanisms which displace such mechanisms are to be welcomed (Naidoo, 2003, p. 256).

Similar perspectives can be obtained from the impact of flexible regimes on access and equity *“increasing the flexibility in education is found an effective strategy to widen access, greater equality of opportunity and breakdown of the barriers between learning, working and leisure”* (Schellekens, Paas, & Van Marrienboer, 2003, p. 282).

Curriculum Mode 2

The fifth driver of change in higher education related to credit frameworks is the emergence of the curriculum mode 2, which changes the curriculum structure, curriculum content, curriculum pedagogy, curriculum aims, as well as the management of it. Many parts of the literature deal with the international on-going process of the restructuring of the curriculum. As Karseth (2005) and Ensor (2002) point out, a new discourse is challenging the traditional disciplinary or vocational curriculum. It corresponds to the credit framework discourse which can be characterised by a transition from subject-based teaching towards student-based teaching and learning, a modularised structure of the curriculum, a curriculum focus on generic skills, a discourse favouring interdisciplinarity and portability, a strong focus on learning outcomes, and alleged new forms of pedagogy and assessment. The curriculum mode 2 gives importance to market relevance, internationalisation, and mobility as a key goal of any curriculum. *“Some of the most important implications...of the Mode 2 thesis for higher education...(are that) courses will increasingly become modularised to provide the greatest flexibility to busy recurrent customers”* (Muller, 2000b, pp. 78-79). Tünnermann (2003) argues that this new discourse, focusing on curriculum interdisciplinarity, curriculum flexibility, and curriculum relevance, is becoming part of UNESCO’s official policy. He also argues that this new discourse is making its way around the world of higher education and that it has a direct relationship with the implementation of curriculum flexibility and credit systems. This discourse (the ideas of a curriculum of mode 2) is now being implemented in many countries in Latin America (Fernández, 2007).

Naidoo and Jamieson (2005), Wheelahan (2005), Subotzky (2000), Muller (2000b), Jansen (2002), and Ensor (2004) interpret the restructuring of the curriculum as a move from Curriculum Mode 1 towards a Curriculum Mode 2.

Modularisation (and by extension credit frameworks) has been presented as a mechanism to enable students to undertake a Mode 2 Curriculum, which is more relevant to the world of work, by disaggregating year long courses, eroding traditional disciplinary boundaries and ensuring greater portability and transferability through the development of modular programmes. The movement towards a Mode 2 curriculum is therefore expected to induct students into a problem solving, applied and interdisciplinary curriculum required for a high skills economy (Naidoo et al., 2005, p. 18).

Curriculum Mode 2 in a very extreme interpretation implies a shift from disciplinarity to interdisciplinarity, from yearlong courses and discipline-based courses to modules expressed in credits, from unique points of entry and exit of the program to multiple entries and exits, from subject-based teaching to student-based learning, and from department structures to program structures. In addition, it implies a more contextualised, contingent, and applicable curriculum (Wheelahan, 2005). “*In the light of this, Gibbons contends that curricula must focus on problem-solving skills, interpersonal communication and learning to learn...Accordingly the spread of Mode 2 trans-disciplinarity into the curriculum requires a shift from discipline-based to problem-based learning*” (Subotzky, 2000, p. 102). Interpreted in this way, the credit exchange discourse is a curricular interpretation of the works of Gibbons et al. (1994), and Gibbons (2000), which is described as a consequence of globalisation and democratisation in many parts of the literature (Kraak, 2000).

Finally, it has to be said that this process of change in higher education cannot be seen as a one-voice chorus. There are many critical views about the process of change in higher education. Many works warn of the potentially undesirable impacts of curriculum transformations on learning, professional and student identity, and quality (Flexner, 1930; King, 1999; Bocock, 1999; Winter, 1996; Jenkins et al., 1994; Watson, 1989; Agelasto, 1996; Heffernan, 1973; Wheelahan, 2005; Young, 2003). Many of those works argue against some of the expected benefits from flexibility and credit frameworks:

Some students seek credits only for meeting graduation requirements and they care little about what they learn. In order to obtain credit, students will choose easy courses, select courses blindly or follow the crowd to popular courses...The credit system creates other problems. Knowledge may be only superficial, a student becomes a Jack of all trades, master of none, lacking systematic knowledge...Students will not obtain sufficiently specialised education to meet national needs. Students-teacher relations will deteriorate, as students become too independent and not seek or follow faculty advice. Teachers face a greater burden, in defining student needs and in devising new courses to meet these needs. Finally the system can become chaotic and academic free for all (Agelasto, 1996, p. 75).

Many years ago, Heffernan (1973) and Flexner (1930) also warned about problems like the misrepresentation of the learning process, the lack of consistency and meaningfulness for institutional policy making, superficial rewards given to students, and excessively mechanical and quantitative models of education¹⁴, which sterilizes personal initiative, academic interest, and creativity.

¹⁴ Similar ideas appear in the work done by Smith (2006), for whom education is less quantitative and more about finitude, randomness, and contingency. He states that education cannot be seen as a fully mathematical matter which can be strictly measured in everything.

What is clear from the above sections is that there is an on-going process of change in the higher education system, which is leading to the implementation of new systems in universities such as credit frameworks.

The Purposes of Credit Frameworks

It can be seen that nowadays, three particular functions are being assigned to credit frameworks (Bekhradnia, 2004; Haug & Kirstein, 1999). One function is transferability and mobility, which uses the credit frameworks as a way to allow students to move between programmes, courses, and institutions according to the credits already attained. The second function is accumulation (Haug & Kirstein, 1999; Regel, 1992), which dictates how students can have flexibility in time and place as they build their degrees, and this accumulation is a key determinant of more flexibility. Therefore, if a student is recognised for learning that he or she has achieved when they have completed a module by being awarded a number of credits for that, then it can readily be seen that they could take a break from their studies and come back subsequently to achieve more credits for further modules. This transition from a transfer system to an accumulation system implies another change from a teacher-orientated curriculum to a student-centred curriculum in which more importance is given to learning rather than teaching (Reichert & Tauch, 2003; Reichert & Tauch, 2005; Crosier et al., 2007). Finally, Bridges (2000) and Crosier, Purser, and Smith (2007) provide a more clear understanding of different academic systems based on European systems. They introduce new and challenging opportunities with the implementation of credit frameworks, not only related to learning equivalence and facility for student mobility but also with the definition of academic standards of qualifications. They identify the advancement of credit frameworks from a transfer system towards a system of accumulation. Finally, they identify a new trend that makes it possible for credit frameworks to move towards quality. *“Recently, attention has focused on a third role: that of helping to define academic standards. Credit has been incorporated into the development of some qualifications frameworks and deliberately excluded from others”* (Bridges, 2000, p. 258). Additional similar ideas on this topic are included in the national and international literature (Restrepo & Locano, 2004; Restrepo & Locano, 2005a; Reyes, 2003; Batista et al., 2008). I will now turn to a discussion in detail of these issues and in particular the relationship between flexibility and credit frameworks and its purposes.

According to Reyes (2003), academic credits must be understood in the framework of a flexible policy in higher education, which enables HEIs to develop new forms of curriculum design, structuring, and organisation. Academic credits also help HEIs to implement alternative academic, pedagogical, and managerial methods, based on flexibility, relevance, and collaborative learning. Finally, academic credits facilitate inter-institutional dialogue and mobility within and outside the university system. Restrepo and Locano (2005a) summarize the uses of academic credits in terms of curriculum flexibility, development of self-learning attitudes, inter-institutional and international mobility and transfer of students and teachers, curriculum updating, improved access to the higher education system, increased inter-institutional transparency, and increased institutional efficiency. Restrepo (2006a) identifies at least seven possible outcomes with the implementation of credit frameworks: *curriculum updating* (when fomenting the supply of new academic activities updated with new pedagogical tools), *improved access* (when, in accordance with the student population, different entries and exits are created which can help increase access rates), *inter-institutional and international mobility* (when facilitating national and international recognition of formal and non-formal qualifications), *flexible ways of learning* (when promoting student-centred learning and recognising the existence of different rhythms of learning), *employability* (when answering to the labour market needs in terms of knowledge, learning outcomes, and competencies), *internationalisation* (when promoting more inter-institutional programs of exchange, transfer, and recognition), and finally, *giving special attention to individual needs* (when fomenting the autonomy of the student to choose an academic route according to his or her particular needs or desires).

The topic of flexibility is a precursor to credit frameworks and is well known in the educational sector. For many authors, it is recognized as a global movement promoted by international agencies like UNESCO, OECD, and the World Bank. However, for other authors, the topic of flexibility is sometimes overlooked (Edwards, Nicole, & Tait, 1999), and it has to be said that it is a very vague concept (De Leeuw & Volberda, 1996). *“The idea of flexibility has assumed the status of a mantra which is mouthed by progressives and conservatives alike and it seems that the very vagueness of the term contributes to its popularity”* (Cloonan, 2004, p. 25). Other authors (Govers, 2008) understand flexibility in terms of a paradox of preservation (controllability) and change (adaptability). Given the challenge of defining flexibility, what is clear among all the authors who provide definitions is that flexibility seems to have an inevitable and unchallengeable impact either on the labour market or the educational sector.

One form of flexibility in relation to higher education is called flexibility of provision. According to Ling, Arger, Toomey, and Kirkpatrick (2001), Rustin (1994), Green and Lamb (2000), Brehony and Deem (2005), Williams (2002), Osborne and Young (2006), and Bondeson (1977), flexible provision in higher education implies that the constraints of time, place, contents, learning styles, forms of assessment, access (entry and exit points in the program¹⁵) and ways of collaborating to learn, which have limited or diminished the university experience of teaching-learning, should be removed (Rustin, 1994). Defined in this way, flexibility implies changes in accessibility, learning, teaching, higher education management, and curriculum design, among others. In particular, according to Rodriguez (2006) and Díaz (2002), one of the forms of flexibility in higher education is curriculum flexibility. This includes curriculum organizational forms, curriculum structures, and curriculum areas or components. This is one area in which credit frameworks have been introduced (Universidad Distrital Francisco José de Caldas, 2004; Batista et al., 2008). The introduction of credit frameworks is then a way to offer flexibility, efficiency, and choice through modularity, semesterisation, franchising, and accreditation of prior learning (Trowler, 1988a; Celis & Gómez, 2005; Betts & Smith, 1998; Beneitone, 2008b), changes which are being demanded in the labour and educational markets.

Although there is not a clear dependency relationship between flexibility and credit frameworks, they can be seen as complementary (Batista et al., 2008). Therefore, the more plausible explanation of credit frameworks can be understood within the move towards flexible learning (Betts & Smith, 1998), which is based on the idea of flexible delivery (provision).

At the heart of credit based modular structure is the potential for flexibility. It provides an opportunity within an institution to make use of a module across a range of different degree courses, to build new courses quickly from an existing stock of modules and to provide differentiated routes within a degree programme. Similarly, if the institution so wishes it can provide courses which allow students to make a substantial amount of choice about the nature of the course they wish to be on. Credit based modular structure is adaptable to the different needs and contexts of institutions. There is a continuum of different patterns of credit based modular structures based on degrees of course flexibility and student choice...The key design features of credit based modular structures...and the learner centred philosophy that underpins them, offer many opportunities for flexible and innovative curriculum development...(it) offers the potential for institutions to develop a responsive, demand-led curriculum to serve both the changing needs of the mainstream higher education student body and the often more specialized needs of business and industry... (Betts & Smith, 1998, pp. 15-75).

¹⁵ This can be related to examples like “cycle” education or “modularisation.” This means a way to divide the program into small parts with clear entry and exit procedures. Europe has given an example of that when defining the three tier model for undergraduate, master, and doctoral programmes. It is also a model in which the programmes have relationships and complementarities.

Some authors, like Allen and Layer (1995), state some of the purposes of credit systems including the idea of flexibility, student's choice, and alternatives of resource management, efficiency, and effectiveness of the university. De Jong and Van Hout (2002) introduce purposes such as giving transparency to the curriculum, giving more accountability, introducing flexibility, and helping with the process of internationalisation (including mobility of students and professors). Beneitone (2008b) and Batista, Giraldo, and Ochoa (2008) include purposes related to transfer, mobility, flexibility, and a way to measure the work done by the student. Ensor (2004) challenges the idea of introducing credit frameworks because of the quality objective, and instead argues that it is more related to the transferability and mobility objective.

Other authors such as Mason, Arnove, and Sutton (2001), describe a macro perspective of academic credits in Nicaragua that has many similarities to Colombia. These authors describe academic credits and their relationship to market-driven economic systems and capitalism.

The use of a system of credits is currently being adopted or considered in a number of countries, notably those undergoing significant economic, social and political change related to transition from state-run centralized economic systems to market-based economies...the credit system...has transformed the university into an institution focused more on narrow, utilitarian aims than on the global pursuit of knowledge (Mason, Arnove, & Sutton, 2001, pp. 107-108).

Finally Trowler (1998b), following the managerialist discourse (a theoretical approach), describes how the concept of credit frameworks respond to new trends in higher education associated with a greater economy, efficiency interests, manageability and market responsiveness. In the case of Colombia, Diaz (2002) is the only author who has properly developed, with detail, the relationship between credit frameworks, flexibility, macro trends and processes of transformation in higher education systems, thus introducing the idea that credits must be seen within a bigger picture.

The idea of credit frameworks is challenging the traditional discourse on curricula (Karseth, 2005). It is bringing a move towards interdisciplinary arrangements, student involvement in the decision making of the curriculum, the introduction of curriculum steering structures, and the adoption of integrated curricula combining theory and practice for increased market relevance. The discourse on credit frameworks is also bringing a move from knowledge or content-based curricula towards competencies or generic skills-based curricula and shifting the emphasis on horizontal rather than vertical relationships between professors and students such as apprenticeships. Trowler (1998a) and Ensor (2004) highlight how the new credit framework, coming from the idea of assigning credit value to assessed learning which emerged in the United States, has intended objectives such as access, flexibility, students' choice, mobility, employability, internationalisation, competitiveness, and efficiency. Trowler (1998a; 1998b) develops the responses of academics to the implementation of credit frameworks. He defines these credit frameworks as an aggregation of matters facilitated by giving credit value to assessed learning. In a way, his focus on the concept concentrates only on the act of giving value to assessed learning. Bekhradnia (2004) identifies different purposes of implementing credit frameworks: to improve, due to the accumulation process, the idea of lifelong learning and removing geographical and time constraints; to recognise not only academic learning but also workplace learning; to widen the participation of young people in the higher education system; to reduce failure and drop-out rates by using the accumulation function of credits; and to strengthen people movement and student mobility. Other authors like Layer (1993) associate credits with student transferability, giving flexibility to academic programmes.

In conclusion, credits have evolved (Restrepo, 2006a) from being a way to promote choice when electing subjects, to a system able to allow *recognition* (formally recognising successful learning), allow *accumulation and transfer* which makes "*academic learning portable*" (Bridges & Tory, 2001, pp. 257, 258) and offers the learner mobility within the educational system and calculates the accumulation of that learning, and *quality and recognition* (academic standard which can help in building qualification recognition and qualification frameworks

enabling a better process of education). In fact, Londoño (2004) and Bridges (2000) interpret credit frameworks as a starting point to initiate a curricular reform including purposes of learning, content of learning, curricular organization, pedagogic strategies, teaching and learning responsibilities, and institutional conditions. It can be concluded that *“academic credits are an integral part of the institutional academic culture, and its implementation have academic...effects”* (Londoño, 2004, p.7). As an example that is related to the European experience of implementing credit frameworks (ECTS), it can be said that credit frameworks provide a *“multipurpose tool not only to ease recognition and facilitate mobility, but also to reform curricula and enhance university autonomy”* (Haug & Tauch, 2001, p. 50). Therefore, it is clear that credit frameworks are a comprehensive policy and a relevant instrument to make important transformations within higher education institutions.

The review conducted above when taken with the introduction chapter indicates that while there is a growing body of literature that gives us rich insights into the area of study including in the Colombian context, at the same time, the literature on credit frameworks has not been systematically studied in relation to a university system. Instead, studies have been limited to individual universities and sometimes without an in-depth analysis. Furthermore, these findings are not presented in a systematic way, which would allow for deeper understandings of the causes and consequences of the implementation of credit frameworks. In addition the possibility to find systematic studies on the relation between credit frameworks and managerial consequences is very limited and there has not been an in-depth comparative analysis across universities on this issue.

Following the literature on the matter, this research proposes a way to systematically understand the relation between credit frameworks and university management, and contributes with a comparative analysis of the Colombian higher education system through an individual and cross case study on three universities of the country.

Chapter 3: Conceptual Framing

The first underpinning for the conceptual framing for this study was based on 'New Managerialism'. I will begin by presenting New Managerialism in a generic sense before turning to the specific national context of the study. The second underpinning for this study was based on principles of management and different ideas coming from the literature on university management in order to understand the possible managerial categories concerning the relation between credit frameworks and the management of a university.

According to New Managerialism, HEIs experience an emphasis on competition (professors, students, research, prestige, and income), which imply a quasi-market situation. This new competitive environment coupled with new regulatory frameworks and funding regimes, is creating a situation in which academic and administrative staff of universities feels pressured to do more work with fewer resources. This situation leads to the introduction of managerial techniques in public and voluntary organisations (such as HEIs) usually found in for-profit enterprises. In addition, according to Brehony and Deem (2005), Deem and Brehony (2005a), Deem (2008) and Deem et al. (2007), New Managerialism is more than a normative model according to which universities must resemble a pre-defined set of rules and values, which is the case in a Post-Fordism or traditional Managerialist approach.¹⁶ Instead, New Managerialism actually implies an ideological construction which includes values, ideas, and practices with specific answers to the what, why, and how of changes. This information can provide a much deeper understanding of credit framework implementation.

It is important to consider the differences between Post Fordism and New Managerialism and their relationship to the introduction of credit frameworks. Post-Fordism can be associated with flexibility in higher education, changes to the curriculum and learning methods, modularisation, semesterisation and the introduction of credit frameworks, but

...to what extent can these be attributed to post-Fordist developments and to what extent are New Managerial ideologies...a more convincing explanation?. Since there are key value and service differences between what happens in public services organisations and what happens in private ones¹⁷, New Managerialism seems to offer a more persuasive explanation than Post-Fordism (Brehony & Deem, 2005, p. 408).

New Managerialism seems to more aptly capture the particularities of the reactions and answers to the implementation of changes like the credit frameworks. Because New Managerialism considers values, ideas, and practices, it goes further than the flat description of change provided by Post-Fordism or particular values or beliefs as defined by Trowler (1998b) or Pollitt (1993).

In order to be clear, another difference must be described between Managerialism and New Managerialism in relation to credit frameworks. According to the managerialist approach (Trowler, 1998b), credit frameworks are just

...a very attractive alternative to traditional models of higher education curricular structures for four main reasons. These are: its economy and efficiency; its potential for market responsiveness and income generation; its ability to extend managerial

¹⁶ Pollitt (1993) or even Trowler (2001, p. 185) describes Managerialism as a framework of values and beliefs or even as an ideology. New Managerialism also includes practices and the use of new techniques. Trowler (1998b) describes Managerialism in terms of particular beliefs and values in addition to a package of management techniques with particular aims. In both cases, this is a very restrictive interpretation of Managerialism.

¹⁷ In the case of universities in Colombia, in theory all of them are providers of a public service and behave according to that, in such a way that there is no difference between good private and public universities.

surveillance and control and its ideological and discursive symmetry with New Right and managerialist ideology (Trowler, 1998b, p. 95).

Said in this way, the outcomes of the credit framework implementation seem to be already decided by the original description of the concept and inevitably associated with a particular ideology. In fact, Trowler himself criticizes the Managerialist approach saying that it:

...simplifies reality and facilitate decision making. The corollary however, is that it occludes aspects of reality and encourages reductionist understandings of social life....This is one aspect of the realist critique of Managerialism: the marshalling evidence to demonstrate that it does not fit the empirical realities of situations in which it is applied, or more simply it simply does not work, at least not in the ways it was intended to...Data from the study of New U show that ideologies, beliefs, assumptions, values, principles, tastes and the taken for granted recurrent behaviours stemming from them which comprises culture are extremely important in the reception and implementation of curriculum policy and are not easily disposable... (Trowler, 1998b, p. 101).

At the end, Trowler concludes his argument by discounting the ability of Managerialism to understand responses to credit frameworks.

...In this paper I have demonstrated that managerialists expectations about the credit framework can be undermined by this sort of response in social contexts, often leading to puzzlement and frustration at clear intentions gone awry. This understanding or academic response to the credit framework and to change suggests that neither the corporate culturism of the managerialist cultural approaches nor the more material incentives and disincentives associated with Neo-Taylorist Managerialism are likely to be particularly successful in university contexts (Trowler, 1998b, p. 107).

That is why this research study considers credit frameworks to be more than just a tool from a particular set of ideologies, or even as a “box of tricks” coming from a particular ideology. Thus, this research study explores the desired and undesired, expected and unexpected, implications coming from the implementation of credit frameworks. This study also maintains a less linear view in order to include different and individual understandings of the change within various institutional settings. This study explores in depth the complex management situations happening within each of the universities studied as part of this research.

Although New Managerialism has been described in the literature just for public institutions (Deem, 2001; Brehony & Deem, 2005; Deem, 2004; Deem & Brehony, 2005a; Deem 2008; Deem et.al. 2007; Amaral, Jones, & Karseth, 2002), it is argued that it can be extended to other institutions, which understand higher education as a public good. In addition, this research study considers that New Managerialism corresponds less to a resource-driven explanation. This research study agrees with the work of Deem (2001) regarding the origin of New Managerialism:

New Managerialism, a concept that purports to explain new discourses of management derived from the for profit sector, whose introduction into publicly funded institutions has been encouraged by government seeking to reduce public spending costs...The search for new sources of finance to replace declining government funding of higher education may have been one of the strong imperatives for adopting New Managerialism (Deem, 2001, p. 7).

However, the scarcity of funding is not the only determinant to explain the changes happening in higher education. On the contrary, New Managerialism, as expressed by Deem (2001) and Brehony and Deem (2005), also refers to ideology and the actual use of new techniques. The ideology is related to values, culture, and views coming from the private sector, and the techniques are related to practices coming from the private sector. Both the ideology and techniques, as expressed by Deem (2001), are present in the Latin American higher education system. However, additional factors specific to Latin America also exist and include the transition from an elite system to a mass system (massification and the effort to widen the participation in higher education via new forms of access), the introduction of new forms of audit and quality assessment in teaching and research¹⁸, the increasing role played by competition and the HEIs differentiation process (Brunner, 2006), and many other local factors such as the process of internationalisation and cultural, technological, and economic changes.

Various authors provide descriptions of the different techniques developed according to New Managerialism. These techniques are (Deem, 1998; Deem, 2001; Deem et.al. 2007; Gleeson & Shain, 1999; Deem & Brehony, 2005): the use of cost centres, the use of outsourcing practices, the introduction of competition within institutional actors (competition between faculties, departments, professors, etc.), the promotion of team work, the emphasis on professionalization of the academic and administrative careers in higher education, and the use of performance indicators and the evaluation and measurement of different outcomes (using league tables, target setting, benchmarking and performance management). The literature also references some of the key principles of New Managerialism (Deem & Brehony, 2005): the erasure of bureaucratic rule-following procedures, the primacy of management above other activities, the increased interest in monitoring institutional and employee performance, the attainment of financial goals, the development of internal quasi-markets, and the increased interest in accountable services. Some of these changes can be directly or indirectly associated with the main goals (monitoring and measuring learning outcomes the activity of students and professors) and impacts of credit frameworks. In addition, credit frameworks can lead to internal competition of faculties and departments, which according to Deem (1998), is also a characteristic of the New Managerialism discourse.

Based on Randle & Brady (1997), New Managerialism can include management techniques such as: strict financial management, efficiency in the use of resources, emphasis on productivity, use of performance indicators, interest in accountability, the interest in a disciplined and flexible workforce, the development of consumerism, and market discipline. This last practice can be linked to the implementation of credit frameworks when students act as consumers or clients and when the system responds to the market (e.g. markets of prestige or markets of students). Furthermore, Restrepo (2006a) has argued that behind the concept of New Managerialism appears the concept of consumerism in higher education, and the reason for this comes from at least four different channels: The first channel, states that consumerism is a step away from the Keynesian welfare state towards a quasi-market framework, in which there is a new regulatory framework related to New Managerialism.

Researchers...have indicated how the development of quasi-markets linked to managerialist frameworks in higher education; have altered the relationships within and among institutions as well as the nature of rewards and sanctions in academic life. In particular, consumerism operates within a regulatory policy framework which is based on the notion that competition between HEIs for limited resources will produce a more effective, efficient and equitable higher education (Naidoo & Jamieson, 2005, p. 7).

The second channel indicates that the relationship (where consumerism appears behind new managerialism) comes through performance indicators and league tables, which have given more choice and alternatives to an avid consumer resulting in consumerist behaviours (Naidoo & Jamieson, 2005). The third channel (Restrepo, 2006a) is through new attitudes in teaching

¹⁸ Which, as expressed by Deem (2001), can be related to reasons like the reduction in funding and the desire to increase control and regulation of the sector.

and learning derived from the New Managerialist approach which see consumerism as a provider-consumer relationship leading to a new quasi-consumerist attitude in teachers and students (e.g. teachers trying to offer and design “attractive” subjects to capture the students’ attention and students choosing the most attractive alternative). Finally, the fourth channel (Restrepo, 2006a) describes changes in curriculum management proposed by New Managerialism, which require flexible provision and individualistic curricula including new choices about time, place, and pace of tuition, new means and models of study, and new means of collaboration in learning. This last channel makes it clear that consumerism is linked with aspects like choice, access, information, and importance given to users (Clarke & Newman, 1997; Riesman, 1980), factors which are also related to the introduction of flexibility and credit frameworks (Mason et al., 2001). Therefore, this means that there are new possibilities of choice in the delivery of academic programs, new and flexible opportunities to access the higher education system, more information given to the student, and more students taking an active part in the service provision.

In conclusion, a possible understanding of the introduction of flexibility and credit frameworks can be associated with the New Managerialist approach.

However, considering those ideas strictly from the perspective of the OECD countries will lead to an incomplete understanding of universities within the Latin American context. A key question which needs to be answered is whether those theories, interpretations, or understandings which have been developed in the higher education sector, especially in the OECD area, do or do not have any relevance to the Colombian higher education context¹⁹.

As expressed by Deem (2001), “*New Managerialism as a concept is mainly identified in specific countries, whereas the other two concepts (Entrepreneurialism and Academic Capitalism), are seen as more universally applicable to western higher education*” (Deem, 2001, p. 13). Many of the topics described before refer to a particular regional context of higher education. However, it is interesting to evaluate if the institutional explanations already presented are appropriate for analysing management of universities in Colombia.

To answer this, it is necessary to explore in detail any reference to Latin America and Colombia in the national or regional literature. In the case of *New Managerialism* ideas, it is necessary to go back and explore how *New Public Management* (NPM) (as a related concept, Deem et.al. 2007)) has been embedded in developing countries like Colombia. It is important to consider the relationship between NPM and the institutional theories already presented, since NPM is considered to be a key element when understanding those interpretations of change in higher education.

Any specific discussion of higher education management needs to be set within the broader context of NPM, if for no other reason than the prominence that both practitioners and policy makers have given the movement in recent years. NPM and related concepts, such as New Managerialism and reinventing governments (Osborne & Gaebler 1993), have dominated public sector reform (Amaral et al., 2003, p. 8).

Sarker (2006) and Braun (1999) define at least two strategies of implementing NPM in Latin America. One is related to efficiency, in which the main impetus is austerity and efficiency considerations in order to face the austere reality. The other implementation strategy is related to the client and market, in which governments are leading changes more according to a neo-liberal government strategy with decentralisation and privatisation. It can be proved that many, or even all, of these situations can characterise the case of a country like Colombia, which has experienced fiscal deficits and constant threats of power legitimacy. On one side, fiscal deficits have explained the adopted path to increase efficiency, resource competition, and the reduction

¹⁹ It has to be said that the current government of Colombia is working on the possibility of the country to be a full member of the OECD. This is resulting in faster transitions and changes in the higher education sector in the areas which have been discussed in this research study.

of government spending. On the other side, legitimacy threats have created political problems, corruption, terrorism, guerrilla groups, para-militarism, and drug-trafficking struggles. All of these changes, in addition to the efficiency concerns, have catalysed transformations in the public sector and have caused the government to search for new public arrangements. These two reasons for the implementation of NPM in Colombia (fiscal deficits and constant threats of power legitimacy) are also described as particular stages of the implementation of NPM in Latin America. In fact, Herrera (2005) describes one stage in which the state was reduced due to fiscal and deficit problems and another stage in which the debate was about public sector functionality and new concerns about efficiency, value added by public services, and the redefinition of the public services and public sector.

Tolofari (2005) and Sprom (2003) are very explicit in the particular changes derived from the implementation of NPM in higher education in Latin America and Colombia. They include topics such as: changes in roles and relationships in the higher education sector; changes in the patterns of government (including the power structure, strategies and mechanisms of control); emphasis on accountability and quality control; the acceptance that HEIs play their role in a quasi-market and in active competition with other HEIs but preserving institutional autonomy; the development of new values (emphasis on performance, individualism, efficiency, output measurement, advisory academic committees, and resource management worries) opposed to traditional ones (collegiality); the strengthening of the central control of the HEIs' direction; the emphasis on the relationship between universities and their external environment; the importance given to widening access (expansion) for minorities, socially, economically and academically disadvantaged groups; and finally, a particular concern over changes in the delivery methods (including the establishment of credit frameworks and many other ways of harmonization) which includes topics like new delivery methods, recognition and accreditation of prior learning and experience, and customerisation of the curricula according to student needs. Credit frameworks can be understood as one of the main tools needed when implementing NPM in higher education²⁰.

In the end, it is clear that many of the transformations in public services in OECD countries are also happening in Latin American countries. Thus, it is not possible to avoid the NPM impact on higher education in a country like Colombia, which, as stated by Amaral et. Al. (2003), is a related concept to New Managerialism in the way it has been described in Latin America's literature.

Given all of this discussion, this research study will use the idea of New Managerialism as a theoretical approach to the process of change due to the implementation of credit frameworks in Colombian universities and will challenge it during the presentation of the findings. However, something more has to be said about the way in which the research will understand the particular impact of credit frameworks in university management and how those ideologies, particular features, and cultural values should be included in the understanding of the relationship between credit frameworks and university management. All of this will be studied in the next part of this chapter.

Credit Frameworks and University Management

Given the focus on the relationship between the implementation of credit frameworks and management this section presents a preliminary understanding of university management and introduces the components (categories) of university management used for the purposes of this research. These management components will be analysed and categorized in the empirical work to understand the main consequences of the implementation of credit frameworks related

²⁰ Hartley (2008) even concludes that consumerism can be seen as a personalisation (in which credit frameworks can be included as a good example) and as a subsequent stage for public services after the implementation of NPM.

to each category. These categories are relevant in terms of simplifying the understanding of the management of a university and making less complex the presentation and organization of the main effects of credit frameworks in management. In addition, following the New Managerialism approach to the process of change, this section also presents additional issues to be considered in the actual process of change at the institutional level, which are the actions and reactions of actors to the introduction of credit frameworks, as well as the kind of micropolitics, cultural, and ideological issues at the institutional level

Fundamental issues when covering university management

As previously mentioned, the possibility of finding studies on how the HEI managerial model has been impacted by the implementation of credit frameworks is limited (Restrepo, 2008). This is because credit frameworks were implemented at various times across countries (some very recently, others many years ago) so it is not possible to consistently study the initial steps of the transformation, or the information regarding the change simply does not exist.

For many authors, the concept of credit frameworks is an appropriate and interesting explanation regarding many changes, which are happening in university management. Trowler (1998a), for example, argues that the introduction of credit frameworks is helping the introduction of rationalistic management practices such as management by objectives, management using performance indicators (balance scorecards), and total quality management. The reason for this comes from the fact that credit frameworks allow for the understanding of many external and complex forces faced by universities, since they are related to many processes of change. *“Credit is therefore seen as a case study that might illuminate some of the complex forces external to and within institutions, which affect the ability of the various stakeholders to influence and manage change”* (Allen & Layer, 1995, p. 12). Agelasto (1996) confirms this by introducing the idea that the implementation of credit frameworks implies profound transformations within higher education institutions in order to be as effective as it is expected to be. *“Without systematic and structural changes, the educational reform discussed (with the implementation of credit frameworks) will be unlikely to accomplish their stated goals of active learning and individualistic curricula”* (Agelasto, 1996, p. 69). Therefore, a successful implementation of credit frameworks must be seen within the context of managerial change in HEIs.

In any case, it is necessary to have a common understanding of what is considered to be part of university management. In order to work on this matter, this research study has reviewed different approaches and explanations in the literature regarding higher education management, higher education change, higher education management of change, as well as other explanations of “university management” comprised of models of quality assurance and institutional university accreditation. Based on Restrepo (2008), a summary of these approaches is provided in Appendix 30. This approach has some relevance to this work since it is a way to understand in a non-complex way the management of a university and to understand in an easier way the main managerial changes during the implementation of credit frameworks.

To develop the model this research study took into consideration various explanations of university management coming from a number of perspectives and summarized from those different explanations the main categories and elements of the management of a university. The idea was to analyse university management in a simpler way, and to build this understanding based on different approaches or perspectives to university management. Those different perspectives include:

- Quality assurance models or models of accreditation and related literature (Wilson, 2005; Vroeijenstijn, 2001; Pabon, 2006; Torres & Pina, 2007; Steed et al., 2005; Calvo et al., 2006);
- Works which have analysed university change and have identified fundamental elements when talking about university management (Trowler, 1998a; Marginson, 2000; Marginson & Considine, 2000; Ford et al., 1996);
- Works that have explored the concept of university management and change within university management, according to which it is possible to extract similar key elements or categories (Deem, 1998; Deem, 2005b; Schellekens et al., 2003; Ferlie et al., 1997; Ashburner, Fitzgerald & Pettigrew, 1997; Watson, 1986; Mc. Nulty & Ferlie, 2004; Amaral & Enders 2007).

Based on these perspectives, it is possible to extract certain key elements of the idea of the university management and based on these, establish the main categories to understand it. Therefore building on Appendix 30 and following Restrepo (2008) and Restrepo (2006b), this research study argues that there are at least four main groups of elements or categories, which must be included when discussing university management:

- *Governance and structure*: This category includes organisational forms, charts and organisational design; leadership capability from the entire organisation and its directors and executives; decision making systems; organisation, distribution, structure, and dynamics of power and authority; installations and infrastructure; steering and coordination procedures or mechanisms.
- *Culture, values and, institutional identity*: This category includes the institution's mission and vision statements; principles, norms and values (institutional *ethos*); institutional identity (organisational meaning); plus all proposed objectives, policies, and strategies.
- *Managerial practices and techniques*: This category includes all of the tactics and processes used to manage the institution, including technological management, marketing and commercial management, communication and information systems management, control and assessment systems, financial management, budgeting, resource allocation processes, quality assurance and performance evaluation management, human resource management, academic management, and service management.
- *Adaptability and resilience*: This category focuses on how the university is able to change and adapt to transformations happening in its environment. This includes the capability to compete internally and externally, convergence with and divergence from similar institutions (including the institutional positioning and prestige), the capability to change, the capacity to learn from itself and from the environment, and the resilience and the capability to adapt.

Transversal issues when covering change in university management

Following the New Managerialist approach and according to many authors (Gornintzka, 1999; Trowler, 1998a; Powell & DiMaggio, 1991; Pettigrew, 1987; Csizmadia, 2003; Deem, 2001; Trowler, 1998b; Bleiklie et al., 2000; Trowler & Knight, 2002; Díaz 2002) when studying the institutional response to change, it is important to consider *structural features* which affect the collective action within each one of the institutions. It is also important to consider its *cultural identity*²¹. In the first group (*institutional structural features*) characteristics can be identified related to the distribution of power and authority, size, and multiplicity of purpose (degree of

²¹ Whorton and Worthley (1981) insist on how in the case of public management, higher education can be understood as a public service even though is provided by private Higher Education Institutions (HEIs), and culture is a key element to understand the change process in management.

homogeneity or heterogeneity in its institutional purpose). If structural features and cultural identity are not considered, one could end up with a very homogenized panorama of universities resulting in limitations for the research to be done. Talking about the implementation of credit frameworks, Naidoo (2003), Naidoo (2005), and Tuunainen (2005) point out, “*the outcomes of forces for commodification (which may include the introduction of credit frameworks) may therefore differ substantially across different types of universities*” (Naidoo, 2003, p. 256). Usually, universities or academic departments or faculties with higher levels of academic capital are less vulnerable to these kinds of forces and transformations²². In the second group (*cultural identity*), culture becomes a key determinant when considering change.

In the case of credit frameworks, Allen and Layer (1995) confirm how

...it is important to acknowledge that the methods of introducing credit schemes have varied considerably. What is not always understood, and this is frequently a barrier to change, is that diversity is a strong feature of credit-based systems...(it depends on) a range of factors specific to the institutions and individuals involved. Resources, geography, history, personalities and other institutional circumstances all had their effect on the nature of specific developments (Allen and Layer, 1995, p. 46).

Therefore, the introduction of credit frameworks varies according to the specific situation of each institution and it is necessary to consider differences (Díaz, 2002) coming from particular settings and cultures, institutional histories, differences in missions, hierarchies, forms of authority, forms of cohesion and integration, forms of motivation within the institution, and senior management philosophies and styles.

Another challenge when studying change in university management is including the dynamics of that change. In order to do this, simple approaches must be avoided, such as those that see the change according to “big bang” or “top down” interpretations of change. According to Restrepo (2006b), it is necessary to move forward incorporating “incrementalist” and “transformational” approaches. The incrementalist approach, as argued by Allen and Layer (1995), implies that cultural motives, interests, and institutional particularities are included, and that change addresses issues regarding the causes and consequences, being able to compare the expected changes with the real ones. On the other hand, in a transformational approach, change affects (Ferlie et al., 1997) horizontally and vertically many of the internal systems of the organization, including organizational forms, power distribution, changes in products or services, new technology, and culture, among others.

In conclusion, the micro analysis and the micro politics of change must consider outcomes which can be ambiguous and contradictory because of tensions, different understandings, cultural actions and reactions, and many other factors which can explain the real changes by considering the actors and their actions and reactions (Trowler, 2002; Bleiklie et al., 2000; Trowler & Knight, 2002; Bleiklie & Kogan, 2000; Díaz 2002). In other words:

...actor's perspectives (agency perspective)...prioritize actors perceptions, perspectives, preferences, actions and interactions...(in addition) structural perspectives (emphasize) on the way behaviour and ideas are constrained by factors external to the individual and the group...Both agency and structure operate in real social situations and this is one reason why we should see the pattern of influence in the implementation staircase as being both down and up...a situated understanding of policy implementation stresses how the same policy is received and interpreted differently in different contexts according to institutional context, history and environment (Trowler, 2002, pp. 10-16).

²² A real example of this in the case of the implementation of new managerial approaches in higher education can be extracted from Deem (2005b) in the case of British universities.

What the literature says about the impact of credit frameworks on university management

When dealing with the managerial changes that happen in relation to the implementation of credit frameworks, the literature tends not to be very systematic. According to Restrepo (2008; 2006b), the most common manner of finding any kind of relationship between credit frameworks and higher education management is through non-connected descriptions or lists of areas in which management has changed due to the introduction of credit frameworks. However, these descriptions or lists only show conclusions from a particular case study, and not from multiple case studies. Although it has been apparent that there is not a strict cause-effect relationship (between university management and the implementation of credit frameworks), usually the literature tries to present credit frameworks as the cause and management as the consequence. According to Watson (1989) and Betts and Smith (1998), managing credit frameworks (including modularisation) demands more from management. This is due to increased complexities, growing interests in accountability, and the fact that management change can be a detonator or motivator of the implementation of credit frameworks.

This section condenses the majority of what has been written about the above and organizes it into four elements of university management introduced in this chapter. Many changes related to university management and the implementation of credits frameworks have been described in the literature in a non systematic way (Van Eijl, 1986; Trowler, 1998a; Trowler, 1998b; Morris, 2000; Ivins, 1994; Rustin, 1994; Bockock, 1999; Winter, 1996; Watson, 1989; Allen & Layer, 1995; Agelasto, 1996; Universidad de los Andes, 2006; Mora & Gallardo, 2005; Cáceres & González, 2005; Robertson, 1994; Betts & Smith, 1998; Nash, 1995; Robertson, 1993; Londoño, 2004; Beneitone, 2008b; Díaz, 2002), from which one can conclude that universities are being transformed in many ways. The four key elements of university management attempt to summarize and better organize the ways in which university management is changing in relation to the implementation of credit frameworks.

1. In Relation to Governance and Structure:

- a. Development of new institutional programmes and structures (Universidad de los Andes, 2006) in which there are new forms of administrative and financial autonomy within the traditional structures.
- b. New links between academic, financial, administrative, and resource planning management (Watson, 1989; Cáceres & González, 2005; Díaz, 2002).
- c. More importance is given to central control, central coordination, and to evaluation processes. This also implies an increase in the power and number of senior university administrators, central committees, and uniformed procedures and processes. These help to link different departments and academic units and faculties and attain economies of scale and new possibilities regarding programmes and subjects. This centralization can take the form of standardization (Allen & Layer, 1995).

The development of the credit framework facilitates managerial surveillance and control in a number of ways. First, treating knowledge as a commodity makes it amenable to rationalistic management practices such as management by objectives and total quality management....Secondly...the credit framework holds out the promise to managerialists of banishing forever producer capture...Control over the curriculum is conditioned by consumer choice rather than producer control...Thirdly, academic departments become decoupled from

control over students' programmes and some centralisation of control occurs as institutions reorganise to administer an homogeneous curriculum structure...These features facilitate more direct top-down models of policy implementation... (Trowler,1998b, p. 99).

- d. Creation of matrix-type models of academic management that break the traditional departmental or faculty model by building a new model that focuses on students' individual needs (Allen & Layer, 1995).
- e. Appearance of new organizational structures and schemes (Díaz, 2002) that break traditional arrangements of departments or schools. This also includes the creation of new organizational units for negotiated studies (individually designed interdisciplinary degrees derived from various faculties) or creation of units of independent students (students not attached to a regular cohort which needs to be managed on an interfaculty basis).
- f. Academic departments losing control over students' individual needs (and thus the students end up controlling the learning process) (Trowler, 1998a; Bocock, 1999) and losing control over central management units (Bocock, 1999) and other changes associated with this situation which can undermine the expected positive results from the implementation of credit frameworks. *"The interdisciplinary nature of the system goes against the departmentalisation of curriculum...On the administrative level these problems (of academic isolation in academic departments and intellectual provincialism) of department turf tend to disable the credit system"* (Agelasto, 1996, p. 85). As a result, it is necessary to introduce changes at the department level in order to successfully introduce the credit framework.
- g. Changes in regulations (Betts & Smith, 1998) associated with rules governing the boundaries of choice, rules on double degrees, and rules on how to govern the HEI including a new role for departments.

2. In Relation to Culture, Values and Institutional Identity:

- a. The renewed and increasing importance given to teamwork (among professors, faculties, and various departments including administrative and financial departments) and the need for new training for staff at all levels (both administrative and academic personnel).
- b. More importance given to transparency and more curricular information offered to students, professors, and others in the institution.
- c. The new protagonist role given to the student in the academic process (student-centred institutions) (Bocock, 1999).
- d. The adoption of business and currency exchange language within the higher education institutions (Trowler, 1998a).
- e. The appearance of a new discourse in higher education and within the HEI cultures which introduces concepts like cost-centres, funding allocations, programmes and projects, and missions and visions, which replace traditional discourses on courses, grants, and collegiality (Trowler, 1998a).

3. In Relation to Management Practices and Techniques:

- a. The development of a new, improved, and professionalized central planning and administrative process related to curriculum administration and other managerial topics of the institution (including forward planning and forecasting processes²³). *“Flexibility can only be offered with strong administrative support and its lack can quickly bring change into disrupt”* (Allen & Layer, 1995, p. 55). An example of this is the timetabling of courses and staff.
- b. A new highly centralized and sophisticated process of registry (Allen & Layer, 1995; Hodgkinson, 1992; Robertson, 1993) which must be capable of generating student records of progress, transcripts of records, and must hold a catalogue of all subjects and modules offered by the university so that students can choose and build their preferred routes in the programme based in the entire “pool” of subjects.

By definition, the tracking of the student has to operate at module level. Given the number of students in any one institution and the number of modules which can potentially combine, information technology is the only realistic way of facilitating genuine flexibility. Without this, students would need to be restricted to a narrower range of choices (Betts & Smith, 1998, p. 117).

- c. A new role for the administrative staff due to the fact that the academic staff becomes less close to the students.

As for years these staff (administrative) has been protecting academic staff from students now they need to change completely and become the students’ friend...administrative staff... can resolve many issues to the satisfaction of the student, and can always refer to academic staff where appropriate. There are clearly many training and development needs that must be met but the administrative staff can provide support that academic staff are unable or do not have time to provide (Allen & Layer, 1995, p. 71).

A new financial system and a new funding regime (Betts & Smith, 1998; Robertson, 1993) with new rules for financial compensations among various departments (Mora & Gallardo, 2005; Regel, 1992) which allows students to be enrolled and take courses in more than one program at a time and to move among departments. This also implies the implementation of new funding allocation systems based on formulas, which consider credit-tariffs and new student financial regulations (Robertson, 1993; Robertson, 1994). In addition, this includes different resource allocation models based on which funding can follow different drivers such as the courses, the number of students, the number of modules taken, or credits taken.

The credit system provides a linkage between units of educational accomplishment and revenues produced and dollars expended in running higher education institutions. Administrative operations, both managerial and economic, can be expressed in credit hour terms: tuition by credit hours elected, salaries by credit hours taught, facilities by credit hours produced and programs of study by credit hours required (Regel, 1992, p. 14).

²³ For example, in relation to the number of students, professors, infrastructure demands, etc...

- d. The use of more computerized information in order to keep track of thousands of students' choices, to meet demand for transparency of information, to provide output information for staff, employers, and students, and to meet the flexible delivery requirements (Cáceres & González, 2005; Betts & Smith, 1998; Hodgkinson, 1992; Robertson, 1993).

...a new student management system was designed and introduced...to meet the needs of a very wide range of offices and individuals including students, teaching staff, registry, departmental and faculty offices, library, student services, finance office, examinations, course management, directorate; to meet management information needs of the institution...; to be flexible in design and use in order to meet new demands...; to put control in the hands of the users...; to be designed, developed and maintained to the highest achievable standards of data processing... (Watson, 1989, p. 118).

Credit frameworks usually imply a new registry process in which the student decides his particular subjects to be taken. To do this, the system should be on-line, function without delays due to a central registry control system, and should respond to new and hard timetabling needs. Computerized information is necessary to manage all of these needs. Thus, one of the critical decisions in the implementation of credit frameworks is the decision regarding the right information technology system and software. Betts & Smith (1998) identify the two ways a university can go about this. Either the system is developed internally in the institution or it is bought from outside the institution.

Both approaches have their benefits and drawbacks...The major drawback of this (buying it from the outside) is that they (IT systems) have not been designed with a particular university's specific scheme in mind. Often they aim at a generic credit based model which does not exist, or they (IT systems) have developed from a specific model and are generalized to meet a wider market. Either way they need to be adapted by the institution and this can allow bugs to get into the system (Betts & Smith, 1998, p. 119).

- e. Importance is given to student counselling, support systems for new students, student assessment, student guidance, and other student support (a new institutional issue which includes more guidance, more and better tracking systems, and improved academic support) (Trowler, 1998a; Burke & Carey, 1995; Allen & Layer, 1995; Betts & Smith, 1998; Layer, 1993; Beneitone, 2008b). In addition, there might be an increase in teachers or lecturers, which act more like contractors with fixed terms. *"There has also been a rapid expansion in the employment of teaching assistants and/or part time staff..."* (Bocock, 1999, p. 122). Finally, it implies the introduction of renewed tutoring services and different kinds of induction practices.

All enrolling students are assigned to a personal tutor, normally an academic teaching in one of their fields who...offers academic advice on the student's choice of programmes as well as other more general advice as required. The tutor is able to monitor each student's progress...offer information and advice to applicants both on an individual basis and on collective occasions... (Watson, 1989, p. 57).

All of these imply new roles and time-consuming activities for staff and teachers (Ling et al., 2001).

The additional demands on the resource academic staff time are not usually reflected in additional budget allocations. The demands on academic staff time are satisfied in part at the cost of time spent on research and in part by staff working longer hours (Ling et al., 2001, p. XIX).

- f. Increased efficiencies gained from students sharing common modules or courses (curricular network of subjects and modules) and the increased efficiency of the delivery (Trowler, 1998a; Morris, 2000).
- g. More choices for students and transformations in structure and human resources development of university staff (Betts & Smith, 1998).

As soon as an institution develops a curriculum philosophy, such as that underpinning credit based modular structures, which assumes that students will make choices outside the department, then courses no longer belong to a department...and students no longer identify solely with a single department. At the more flexible ends of the curriculum based modular structure, they may not even identify with a single faculty. Whatever the organizational structures of the university, the boundaries in place for the purpose of managing the organization are likely to produce barriers to flexibility. Institutions...must therefore attempt to meet the organizational requirements of staff, including their need for resources, their professional development, their concern for the subject, its development and their research (Betts & Smith, 1998, p. 27).

- h. Another group of changes are related to particular areas of universities. Some of these include:
 - i. Changes in the informational technology of universities (Rustin, 1994; Allen & Layer, 1995).
 - ii. Libraries redefined as information centres with many materials via WEB (Rustin, 1994; Londoño, 2004).
 - iii. Uniform procedures for admission, marketing publicity, timetabling (common timetabling process), scheduling issues, and academic registration (Rustin, 1994; Allen & Layer, 1995; Betts & Smith, 1998).
 - iv. Improving planning systems in order to avoid uncertainties coming from the implementation of credit frameworks (Watson, 1989).
 - v. New ways of measuring teaching workloads, teaching salaries, building spaces, and learning processes (Heffernan, 1973). All of these refer to a new resourcing and funding process, in which all resources are measured according to credits (Betts & Smith, 1998).
 - vi. Additional infrastructure costs (Ling et al., 2001); infrastructure demands which include new informatics resources, laboratories, cooperation agreements, and group-study places (Londoño, 2004); and increased student office hours for professors (Cáceres & González, 2005).

- vii. New requirements to standardize assessment practices so that students' information can be easily understood and accepted by different units, faculties, and departments (Allen & Layer, 1995).
- viii. New changes to standards and assessments (Betts & Smith, 1998) including a process of continuous assessment (ensuring comparability of standards across similar subjects among various programmes and in the marking process itself), the development of new resources and online library and learning resources, the implementation of new assessment regimes, and changes to the marking process.
- ix. New issues of quality assurance (Betts & Smith, 1998) including a more centralized quality assurance process.

4. In Relation to Adaptability and Resilience

- a. The traditional supply model in higher education in which the university identifies the needs of the society and their students' needs, tends to be replaced by a demand model in which the university is more concerned about market forces, students' needs, and demands from the society (Allen & Layer, 1995).
- b. More innovation is possible due to new subject combinations and new courses (Rustin, 1994, Betts & Smith, 1998), new programs to be offered (Díaz, 2002), and new optional subjects which can assist with funding difficulties.

Subjects that might not recruit enough students for a whole degree course, might nevertheless attract students for some optional units, or be offered in joint honours combinations with other subjects. This form of flexibility is beneficial to areas both in rising and falling demand...New subject-area niches have opened up, for subjects offered first in combination with others, but then with the chance of growing into full-scale degree programmes (Rustin, 1994, p. 194).

All of this can help in the efficient use of resources, the increase of funding, and more market-responsiveness.

- c. Changes in some universities to their marketing procedures such as changes to the "branding of a particular university" due to the introduction of credit frameworks. Some universities will wish to portray a public identity that is traditional or safe, and others, using the novel credit framework, will wish to position themselves as flexible, client responsive, non-traditional in delivery and method, and interdisciplinary. In this case, the marketing process changes and can even position credit frameworks as an institutional added value.
- d. Increased efficiency in some universities that can take advantage of credit frameworks in order to obtain economies of scale, incur fewer costs, and find new sources of income. This also relates to the possibility of easily opening new academic programmes based on flexibility.

Institutional actors and unintended consequences in university management

Other important topics when dealing with the relationship between credit frameworks and management are the institutional actors and their reactions and unintended consequences and adverse reactions. It is necessary to understand the way in which different actors from the institutions act and react and how this issue affects the final process of change in the management of a university.

Related to the change specific to the introduction of credit frameworks, Allen and Layer (1995) highlight the differences coming from diverse actors' reactions in favour of and against the introduction of credit frameworks. They identify four types of actors: enthusiasts (who defend credit frameworks based on national goals, democratic participation, and institutional reforms); pragmatists (who are looking for answers to problems they are experiencing); sceptics (who challenge and question the purposes and processes of the implementation of credit frameworks); and antagonists (who are against the process of change). A research study like this one needs to evaluate the types of actors and the micro politics related to them, in order to capture the actual process of change and the expected and unexpected resistances that are exerted.

The reasons for this concerted resistance may lie in the historical structure of institutions, their curriculum (vitae) and the rewards package...The issues which disturb staff most when faced with credit and modularity include the nature of the curriculum; their own professional role; the relationship to students; and the administrative structures that are needed to support them (Allen & Layer, 1995, p. 60).

An explanation of the kind of opposition to certain processes of change can be obtained from the work of Pierre Bourdieu, who, similar to Naidoo (2003), implies that universities have deep cultures, values, and habits, which form forces of reaction in favour of or against certain processes of transformation. "*Universities which are in the upper echelons of the hierarchy with high levels of academic, reputational, and financial capital and high degrees of autonomy may be more impervious to pressures for commodification than others...*" (Naidoo, 2003, pp. 254-256). Trowler (1998a) confirms that and adds that the degree of dissent or consent is also affected by cultural particularities and the degree of involvement with the implementation.

In conclusion, this research seeks to understand those issues of institutional particularities and culture as transversal issues in the process of implementing credit frameworks. Those matters become key issues when considering the micro-politics of the process of change in the implementation of credit frameworks and will be included in this study.

It is also important to highlight possible managerial difficulties and adverse consequences. Trowler (1998a) includes some of these difficulties such as the increase in the administrative work of academics resulting from the implementation of credit frameworks (inefficient and unnecessary administrative structures and processes and bureaucratization²⁴), the constant demand of information from the centre and its on-going challenges with the computer systems, the increasing and unnecessary control and surveillance (very high level of accountability), the excess of power given to managers and less to academics (Rustin, 1994), the conflicts and

²⁴ Ending in the reduction of staff-student contact quantitatively and qualitatively going against the learning process of the student.

contradictions between the flexibility aspiration and the administrative centralisation; and the rapid and uncontrolled escalation of assessment²⁵ with an excess of rationalisation of the educational process (Smith, 2006). Betts & Smith (1998) talk about the problems derived from students losing their departmental homes (traditional roots), which can create serious problems of quality. Jary and Parker (1994) and Smith (2006) talk about the “proletarianisation” and degradation of the academic profession due to the excess of central controls and the excess of rationalization and instrumentalisation of higher education via quantitative performance indicators. Mason, Arnone, and Sutton (2001) included undesired impacts like the creation of chaos within the institution and its management. As a result, there is usually some kind of reaction against the system coming from academics, which is also described in the literature.

Academic staff retains reservations about the advantages of credit systems. There is scepticism, some hostility, but also some enthusiasm amongst academic staff towards the further development of modular and credit-based programmes...academic staff fear fragmentation...Secondly, they fear the loss of intimacy that credit systems produce. Thirdly, they question whether students really want so much choice...Fourthly, they suspect a hidden agenda of government intrusion through market forces into the professional world of academic life, compromising academic autonomy and driving down costs with negative consequences for quality in teaching and research. Finally, they do not see sufficient evidence yet that increased student choice leads either to better managed academic programmes, or to more professional freedom (Robertson, 1994, pp. 13-14).

In summary this research will understand the relationship between credit frameworks and its managerial consequences and causes based on the idea of New Managerialism. Although no much has been said about this in the Colombian context, based in the literature it is plausible to say that the implementation of credit frameworks in the country could be understood in this conceptual framing. Following from that, and considering a particular model to understand the main managerial impacts of the implementation of credit frameworks, this research has brought a systematic idea of management considering 4 main components (governance, culture, practices and adaptability), in addition of the particular institutional features, the culture and the specific actor's actions and reactions to the implementation of credit frameworks.

As can be seen, there are plenty of examples provided in the literature regarding the many types of changes occurring in university management, which can be related to the implementation of credit frameworks. This research study further explores those changes through the study of multiple real cases in the higher education system in Colombia.

²⁵ Expressed also by Morris (2000, p. 241).

Chapter 4: Research Approach and Design

This research focused on a complex and poorly studied (Restrepo, 2006c) topic (the relationship between credit frameworks and university management), not only in the Colombian literature of higher education, but also in the international literature. I will begin by recapping on the research questions, which were presented in earlier parts of the thesis

- Question 1: How did universities in Colombia understand the concept and purposes of credit frameworks?
- Question 2: Which are the main causes that have catalysed the introduction of credit frameworks in Colombia?
- Question 3: How were Colombian university management systems impacted by the implementation of credit frameworks?

This research argues that based on the answers to these questions, it is possible to understand how the management of universities is related to the implementation of credit frameworks. This research study will not treat this relationship (between credit frameworks and university management) as a cause-consequence relationship, but as issues which could co-constitute important aspects in a process of change in higher education. The point is that implementing credit frameworks could imply new demands in management, but also management could be a detonator or motivator of the implementation of credit frameworks.

Question 1 tries to comprehend the different ways a university could understand the concept of credit frameworks and how the university determines the possible methods of implementation of the credit framework in each university. This question implies that within a university, you could have different ideas of credit frameworks, which could correspond to the different levels of understanding of the idea of credit frameworks formed during recent years in Colombia and Latin America. In addition, this question is important in order to be able to determine the possible purposes given to the credit frameworks.

Question 2 corresponds to the main causes in the implementation of credit frameworks. This means to understand the main drivers explaining why the credit frameworks were implemented in Colombian universities and what was behind that implementation. In other words, understanding the context in which credit frameworks were implemented and the hidden reason(s) for this implementation.

Question 3 implies studying in detail the possible impacts on management due to the implementation of credit frameworks. Therefore, this question relates to the main consequences of the implementation of credit frameworks on university management. To understand this matter, it was necessary to categorize into four main elements the many possible changes due to the implementation of credit frameworks. The last chapter provides a way to categorize the concept of university management and the possible consequences into four elements.

In order to operationalize some of the insights uncovered in the chapter related to conceptual framing, the research design adopted was based on Pettigrew's (1997; 1994; 1990; 1987; 1985b) approach, which offers a comprehensive way to do research considering the content, the context and the process of change. In other words, a contextual and processual methodology that avoids linear relationships and include embeddedness, temporal and contextual analysis

This study thus avoided the traditional approach of using a hypothesis derived from previous knowledge that is then tested and verified, and finally any new knowledge is added to the original hypothesis (Bleiklie & Kogan, 2000). Based on Pettigrew's (1985b) approach, this study treated the topic of study as a social process in which there were political processes, action-reaction attitudes, and contexts which in the end could result in many kinds of consequences (Amaral et al., 2003), especially when studying a change process. Therefore, this

work did not treat credit frameworks as an independent variable and management as the dependant variable. This kind of view tends to be linear and not very appropriate for understanding this type of complex problem. Instead, this research study understood the relationship between credit frameworks and management as a complex matter, in which they both can impact, and be impacted by each other. Furthermore, this research study prioritized the importance of exploring the situations and the processes that were happening within universities regarding the interrelationships between both the management systems and the implementation of credit frameworks.

A Comprehensive Research Method

Considering the complexity of the research topic of this study described above, a research approach was needed in which all the interrelationships among the factors related to the content, context, and process could be analysed together. To manage this complexity, this research study used Pettigrew's contextual (Pettigrew, 1990; Pettigrew, 1985b) and processual methodology (Pettigrew, 1997; Pettigrew, 1985b).

This contextual and processual methodology seeks to find the relationships among multiple processes and outcomes while avoiding assumptions about linear relationships. This research study explored the relationship among university management systems, the implementation of credit frameworks, and the associated outcomes. As Pettigrew expresses, this is an ambitious goal.

I recognise that for some process scholars there is not ambition to capture this link between process and outcome, but would argue any processual analysis is not only incomplete without this step but also is pragmatically endangered by this omission (Pettigrew, 1997, p. 340).

Furthermore, Pettigrew (1985b; 1994; 1997), gives five assumptions that were used in this research study when applying the contextual and processual methodology:

- a. Embeddedness implies that processes must be studied across many levels of analysis. Embeddedness also implies that both vertical and horizontal levels, as well as the interconnections among those levels must be studied. Vertical levels include the impact of the environment and context on the process of change. Horizontal levels include the sequential interconnections between the past, present and future times studied. Those levels must be “*clearly delineated but theoretically and empirically connectable*” (Pettigrew, 1985b, p. 238).
- b. Temporal interconnectedness implies that processes must be studied in the past, present, and future.
- c. Context and action should be studied together. Context must be studied from both the internal and external perspective:

Outer context includes the economic, social, political, competitive and sectoral environments in which the firm is located. Inner context refers to inner mosaic of the firm; the structural, cultural and political environments which, in consort with the outer context, shape features of the process...Thus explanations of the changing relative performance of firms should be linked to higher levels of analysis (sector changes and alterations in national and international political and economic context), and lower levels of analysis (the drivers and inhibitors of change characteristic of different firms culture, history and political structures (Pettigrew, 1997, p. 340).

Context must also be explained together with action. This work considered that the contextual study done was not an active environment that influenced a passive institution, because within the institutions there could also appear different reactions (Amaral, Meek, and Larsen, 2003). The methodology of interviews and case studies used in this research study were designed to consider both the context and the actions. In the words of Pettigrew, it is designed to understand the various actors, *“in terms of the verb forms of interacting, mobilizing, acting, reacting, responding and adapting...The focus is on the language symbols of becoming rather than of being, of actors...in motion”* (Pettigrew, 1985b, p. 238).

- d. Linearity should be avoided and the processes should be studied using a holistic approach, including a theory or theories to understand the process of change (Pettigrew, 1985b).
- e. Processes must be linked with outcomes and with the location (universities) of the processes.

It is clear that studying change processes includes studying a multitude of factors simultaneously and attempting to explain the relationships among all of the factors, accepting that change is multi-causal and complex. For instance, the idea is to include topics like the context related to the change process, while considering the historical interconnections, structures and logics of the process of change, and at the same time studying how context defines actions and how actions define context. A similar line of thought comes from Pawson and Tilley's concept of realistic evaluation, which describes the need to consider mechanisms (which includes choices and capacities of actors and organizations which lead to regular patterns of behaviours), context (spatial and institutional locations of social situations together with the norms, beliefs and values included in them) and outcomes (Pawson & Tilley, 2004).

The way to do this kind of processual and contextual research is to use a *historical study of change processes with comparative case studies*²⁶ (Pettigrew, 1979). In this type of research, an organization or system is studied by understanding the reality of, and connecting the relationships among, the past, present and probable future. Using such a method is considered a critical part of the research regarding the issue of time. In the case of this research study, the process of change began before the normative and legal requirements for the implementation of credit frameworks in Colombia. The ending point corresponds to the present moment, or present state of the higher education system in Colombia. This timeframe definition captures the antecedents of the process of change, the process itself, and the more recent consequences or new changes derived from the process. Another way of capturing these various aspects is to understand a particular organization as a continuum of *key moments*. This kind of analysis is part of what is called processual analysis (Pettigrew, 1985b; Pettigrew, 1997) and implies the study of a

...sequence of individual and collective events, actions and activities unfolding over time in context...The driving assumption, behind process thinking is that social reality is not a steady state. It is a dynamic process...Actions drive processes but processes cannot be explained just by reference to individual or collective agency. Actions are embedded in contexts which limit their information, insight and influence. But the dual quality of agents and contexts must always be recognised. Contexts are shaping and shaped. Actors are producers and products. Crucially for any processual analysis this interchange between agents and contexts occurs over time and is cumulative. The legacy of the past is always shaping the emerging future. What happens, how it happens, why it happens, what results it brings about is dependent on when it happens... (Pettigrew, 1997, pp. 338-339).

²⁶According to Pettigrew (1979), and considering the timing of the process of change in Colombia, in order to obtain the information needed, this research study adapts Pettigrew's longitudinal study of change as the method to be used, using historical information from each of the cases studied.

Therefore, this kind of analysis must consider the history, the actors, and the context. The methodology also implies that one must search within the cases for (a) patterns among the various cases; (b) underlying mechanisms which shape the patterns, also known as the drivers for the patterns; (c) networks or intertwined (Pettigrew, 1992) processes and why similar processes can lead to different outcomes.

Furthermore, the methodology for this research study was centred on a historical study of change processes with comparative case studies because it provides the best way to build theory by using empirical reality in connection with literature revision (Yin, 1984; Eisenhardt, 1989). It also opens the analysis to more than one case study, instead of only using one case study that has been common in the literature (Trowler, 1998a; Allen & Layer, 1995; Agelasto, 1996). Finally, this methodology allows the possibility to connect context, process, and content and to capture the complexity of the problem in a different way than what has been researched until now. One of the key characteristics when dealing with *historical comparative case studies* is the time setting²⁷. Time is the reference to see how changes happen and how it is possible to identify patterns, causes, consequences, and change differences²⁸. In the case of this research study, time corresponds to the period during which universities have transformed due to credit frameworks (2002-2011) although the research went back to the antecedents of the implementation of credit frameworks (back to 1998).

Selection of Cases Studied

One of the methodological problems encountered is deciding on the number, names, and ways to have access to universities to be included in this research study. Deem (2001)²⁹ and Barry, Chandler, and Clark (2001) have all insisted that outcomes can differ substantially across different types of universities and subject areas. A solution to this issue is to increase the sample size in order to catch such heterogeneity.

However, this research study maintains that although the argument to increase sample size can be correct, the conclusion can be misleading in terms of methodology. The depth of a study does not come from the number of universities but from the way in which the comparative case study is done. Therefore, researchers must account for complexities due to different cultures (even within one university), levels of the university included in the interviews, cross-case analysis, using both qualitative and quantitative analysis of the data. The question of choosing the appropriate methodology leads to the debate about isomorphism versus complexity. According to the literature in higher education dealing with complexity and its diverse impact on change (Gornitzka, 1999; Deem, 2001; Deem, 2005b; Trowler, 1998a; Tuunainen, 2005), variables such as organizational size, institutional purposes, quality standards, disciplines offered, institutional ideology and history, among others, determine different answers to change and therefore studies must include broader samples to account for those differences. On the contrary, this research follows the literature on isomorphism and convergence (Powell & Di Maggio, 1991), Marginson & Considine, 2000b; Skoldberg, 1991; Ntshoe, 2004) according to which “*there is a constraining process that forces one unit (university) in a population (higher education sector) to resemble other units (universities) that face the same set of environmental conditions (imitating or mimicking behaviour)*” (Powell & Di Maggio, 1991, pp. 64-67). In the case of

²⁷ Pettigrew (1990) states, “*truth is the daughter of time*” (p.274).

²⁸ According to Pettigrew (1990), time is “*more than just a chronology of events...instead events are seen as stepping stones in the search for the study of structures...What is critical is not just events but the underlying logics that give events meaning and significance. Understanding these underlying logics in the process of change is the goal, and this requires data on events, interpretation of patterns in those events...*” (p.273).

²⁹ According to Deem (2001), “*secondly, diversity in forms, practices and cultures of higher education can be overlooked if the data on which we base our analysis is to narrowly drawn*” (p.13).

Colombia, which, due to more competition³⁰, competition for prestige³¹, and the new regulations of the higher education system, are all leading to coercive and mimetic isomorphism (Powell & Di Maggio, 1991, pp. 66-74).

According to Powell and DiMaggio (1991) and DiMaggio and Powell (1983), it is reasonable to study a small, representative group of universities because this process of homogenisation will cause the universities to try to resemble each other.

We ask, instead, why there is such startling homogeneity of organizational forms and practices, and we seek to explain homogeneity, not variation. In the initial stages of their cycle, organizational fields display considerable diversity in approach and form. Once a field becomes well established, however, there is an inexorable push toward homogenisation...The concept that best captures the process of homogenization is isomorphism...(which) is a constraining process that forces one unit in a population to resemble other units that face the same set of environmental conditions (Powell & DiMaggio, 1991, pp. 64-66).

This process of homogenization can be explained according to the new-institutionalism theory as the result of two types of isomorphism³². One type of isomorphism, called competitive isomorphism, is the result of the market competition, niche change, and fitness measures.

Institutions are stimulated to find their own niche that discriminates from niches of the other institutions. However this assumption ignores the fact that the higher education system has characteristics that deviate from those of competitive markets. First...there is a far reaching degree of government intervention. Central governments regulate and finance higher education and control its quality...Second, clients consider things other than price and quality of academic products. The regional position of an institution and its traditional status are important as well. Third, the professional character of an institution leads to an important orientation toward the accepting by the professionals of institutional strategic policies. Finally the higher education field is highly structured and has shown a rather steady structure throughout many decades... (Maassen & Potman, 1990, p. 404).

It can be argued that many of these characteristics are starting to happen in universities within the higher education sectors facing a growing market-like behaviour. The other type of isomorphism, called institutional isomorphism, corresponds to the idea that institutions compete not only for resources, but also for political power and recognition, institutional legitimacy, social fitness, and economic fitness. This institutional isomorphism has three different *mechanisms*: mimetic processes (imitations between organizations coming from uncertainty), coercive process (from formal and informal policies), and normative pressures (from professionalization which builds similarities in the professional counterparts and which builds isomorphism across different organizations).

In the case of the Colombian higher education system, it can be hypothesised that both institutional and competitive factors lead to isomorphism in the world of universities. However, one must take into consideration that diversity is also a part of the institutional and national

³⁰ In fact, Powell & DiMaggio (1991) described two kinds of isomorphism: competitive and institutional. The former occurred due to competitive markets, and the latter occurred due to political and normative influence.

³¹ According to which universities are trying to resemble the most recognised universities and are looking for the same prestige.

³² According to Maassen and Potman (1990), isomorphism can be defined as “*a constraining process that forces one unit in a population to resemble other units that face the same set of environmental conditions*” (p.404).

policy discourse, and any sample must include both similarities and differences across universities. In a combination of the two types of isomorphism, universities with the quality assurance model are competing not just for resources and students, but also for institutional legitimacy (Brunner, 2006). Regarding institutional isomorphism, Powell and DiMaggio describe the mechanism of coercive process when they state, “*In some circumstances, organizational change is a direct response to government mandate*” (Powell & DiMaggio, 1991, p. 67). The mechanisms of mimetic processes usually happen in situations with high uncertainty regarding means and goals³³, and normative processes are derived from a growing professional network of academics and administrators in HEIs who work together, day after day, on particular institutional processes³⁴. As a result, it is possible to obtain conclusions from a small group of universities that can be extrapolated to the whole system, keeping in mind that there could be institutional and particular differences that must be explained. The universities included in the sample must identify differences and divergence in order to capture the entire reality of the sector, and how it can combine institutional diversity and isomorphism trends³⁵. Building on the concept of differentiation, universities in Colombia do not necessarily differentiate themselves in terms of public and private, but in terms of *university from the peak* and *universities from the base* (Kent, 1997). The first term refers to the most prestigious public or private universities, and the second term refers to universities with less quality which are usually teaching and professional-centred universities. With the implementation of the quality assurance system in Colombia (including the national accreditation system and other quality related policies), it can be hypothesized that these universities, in many cases, are trying to become peak universities. This argument has been proven in the literature in other countries by Stensaker (2000), who concludes that audit and quality procedures can lead, partially, to a homogenous and standardized higher education system.

Furthermore, Naidoo (2004) argues it is possible to characterize social formations and even organizations in terms of their academic and scientific capital, which she calls their cultural capital. Naidoo states:

Bourdieu distinguishes between two forms of capital: academic capital, which is linked to power over the instruments of reproduction of the university body; and intellectual or scientific capital, which is linked to scientific authority or intellectual renown. In other instances, however, the two definitions appear to merge and academic capital is defined as an institutionalized form of cultural capital based on properties such as prior educational achievement, a disposition to be academic and especially designated competencies. It is in this second sense that academic capital is used in this paper... (Naidoo, 2004, p. 458).

Given this concept, the idea is that universities that have received their high quality accreditation represent in a way one big type of cultural capital model and the universities that

³³ In the case of Colombia, the lack of information in the higher education system is leading to levels of uncertainty about the application of new technologies like the credit framework. It is not simple for one university to learn from another due to a very competitive rather than a cooperative environment.

³⁴ Examples of these are the growing use of academic and administrative peers in the quality assurance process and the growing role of university agencies or institutional agreements and meetings in which universities share objectives, advances, and possible new policies to be implemented alone or together. Examples of this kind can be derived from the meetings and the new role of ASCUN (Colombian Association of Universities), Grupo de las 10 (top ten university meeting), and Grupo de las Acreditadas (the group of the universities accredited institutionally). According to Maassen and Potman (1990), a “*quality control system that...relies heavily on peer review...(which) means that professionals within a specific sector evaluate performance in education and research within the sector...(also) stimulates a primarily discipline directed orientation of the professionals instead of a more institution directed orientation*” (p. 407) and therefore leads to a clear normative process of isomorphism.

³⁵ In the case of Colombia, in which private universities represent a large proportion (57%), and according to Levy (2006), isomorphism and diversity must both be considered to be part of the process of change in the higher education sector. In these cases, isomorphism, for example, could be between one institution and the sector or even the subsector.

have not attained that accreditation can be characterised in a separate group. This research study aims to have representation from both groups in order to better represent the whole system.

This research study chose *representative* universities, to which the researcher could have access, in which there were more visible results regarding the implementation of the credit frameworks, and which represented models to be copied by other universities according to the convergence argument. This method agrees with Pettigrew's (1990) perspective on choosing research sites. Pettigrew states it is preferable to choose sites with more progress, high performance, more experience and better implementation³⁶.

To use this methodology, one must first understand the higher education system in Colombia. It includes 292 HEIs, 80 of which are universities (MEN, 2011) (43% public and 57% private). The national policies on higher education are centralised in the Ministry of Education, which delegates authority to the Vice-Minister of Higher Education. Related to quality matters, the system has two national bodies, the National Quality Assurance Committee (CONACES) and the National Accreditation Council (CNA), both of which include members of the academic community. The CONACES is in charge of guaranteeing all academic programs in the country have minimum quality standards according to law, and the CNA is in charge of giving national accreditation to the best programs and the best HEIs in the country in accordance with the national top-quality model.

Given the isomorphic argument, this research study included in the sample size two Colombian universities which have attained the national high quality accreditation given by the CNA. A third university, one that has not yet attained the national accreditation but was interested in it, was also included in the sample. The first two universities represent the pacesetters of the country, and therefore it is assumed that convergence follows their lead. And the third university represents many of the Colombian universities that have struggled to be part of the accredited group. The universities in the sample were not selected on the basis of variations in their approach to the implementation of credit systems, since that was not known before the research study began. However, those pacemakers, according to the top-quality model, represent universities who have demonstrated significant advances in terms of curriculum and credit framework implementation. Universities that for any reason implemented the credit frameworks before 2002 were not selected to be part of the sample, since the process of change was not comparable.³⁷

Based on Gornintzka (1999) and Naidoo's (2003) references to Bourdieu's literature, when choosing universities for the sample, this research study considered differences according to the organisational structure, size, and primary purpose or purposes of the universities to be studied. Considering these factors ensured that enough variables and levels of complexity were included in order to find the final three universities to be studied. This research considered some opposing characteristics³⁸, which help explain differences in the implementation of changes such as:

- private vs. public,
- accredited vs. non accredited
- universities located in the capital city of Bogota vs. in other cities (regional universities)

³⁶ Pettigrew recommends thinking in at least four possible ways: *choosing extreme cases* (when the number of cases is small, the best idea is to choose the ones where the progress is more transparently observable or the most visible cases which usually correspond to elite cases); *choosing polar types* (sites which illustrate high and low performance or cases which deny "normal" patterns of change); *choosing sites with high experience* (sites that demonstrate experience with the change); *choosing informed sites* (where one can get more output and more probabilities of negotiating access to information).

³⁷ This includes some universities in Colombia which implemented the "credit system" many years before 2002, due to other reasons (Universidad de los Andes, Universidad del Norte).

³⁸ Similar variables are recommended in Latin America by CINDA (CINDA, 2007, pp. 81-82).

- universities with disciplines which make them more or less complex³⁹
- research-based universities versus teaching-based universities⁴⁰

All universities included in the sample were representative of the process of implementation of credit frameworks and this process was very well documented⁴¹.

The first two universities for the sample were chosen among the group of accredited universities, but excluded those universities which implemented credit frameworks prior to the timeframe defined in this study. The entire list of accredited universities that qualified for the research sample were: ⁴²

- Universidad del Rosario;
- Universidad Javeriana;
- Universidad del Valle;
- Universidad Industrial de Santander;
- Universidad de la Sabana;
- Universidad Pontificia Bolivariana;
- Universidad EAFIT;
- Universidad Externado;
- Universidad Tecnológica de Pereira;
- Universidad de Caldas;
- Universidad de la Salle;
- Universidad de Medellín;
- Universidad Santo Tomas;
- Universidad de Antioquia.

In the end, the accredited universities chosen for the sample were Universidad del Rosario and Universidad de Caldas. One non-accredited university, Universidad Católica de Colombia, was also chosen. This university also differs in that it has a presence in various regions of Colombia. Below is a list of characteristics of each university:

1. Characteristics of Universidad del Rosario:
 - a. Accredited
 - b. Private
 - c. Complex
 - d. Teaching/research oriented
 - e. Located in the capital city of Colombia (Bogota)
 - f. No regional extensions
2. Characteristics of Universidad de Caldas:
 - a. Accredited
 - b. Public
 - c. Complex,
 - d. Teaching/research oriented

³⁹ A complexity characteristic which was used in the sample was universities with medicine and engineering and universities without those programmes. Therefore, in the end, the sample included two universities which have medicine and engineering and one which does not.

⁴⁰ The sample included one very well recognized research-led university, one which was moving in that direction, and one which did not have such recognition. The way to characterize this was using the results from indexes of publications such as ISI-WEB ok Knowledge, SCIELO, and SCOPUS during the last 7 years.

⁴¹ Pettigrew (1990, p. 276) defines this as high experience levels of the phenomena under study and more informed choice of sites.

⁴² Universidad de los Andes and Universidad del Norte were excluded for the reasons mentioned above.

- e. Located in a non-capital City in the country (Manizales), although is a Capital city for its particular region.
- f. No regional extensions

3. Universidad Católica de Colombia:

- a. Non accredited
- b. Private
- c. Non-complex
- d. Teaching oriented
- e. Located in the capital city of Colombia (Bogota) with extensions in other regions
- f. Has extensions in some regions of Colombia

The idea is to be able to generalize conclusions to the whole system of higher education in Colombia, which today includes both accredited and non-accredited universities. This study is able to do that also because those universities included have implemented the credit frameworks after 2002, meaning that they have all experimented with the system recently, like many of the other universities in Colombia. In addition, the universities in the sample represent different structural features that now characterize the system in Colombia (public vs. private; complex vs. non-complex; different sizes; different locations; research vs. non-research based; more or less universal in disciplines; among others). Considering such distinct features it is possible to capture the differentiation of the higher education system in Colombia in such a way that the conclusions from this study could be not only useful but also representative of other universities within the country.

From the three universities studied, it is then possible to share lessons and provide knowledge for other universities in the system to use. Finally, the three universities included are well-recognized by peers in their academic work and, in many ways, have shared and taken knowledge to and from their colleagues and competitors, thus having used similar academic practices to their peers. Therefore, it could be possible that practices related to the credit frameworks could come from other universities in the country, and that best practices (in the implementation of credit frameworks) by the universities included in the sample could be extended in the future to other universities in the country.

The three universities can also be comparable because they have all implemented credit frameworks, although at different levels of implementation (issue which was not known when choosing the sample). Therefore, this study could also provide an understanding of the way different kinds of institutions (kinds of institutions which similarly also exist in the whole system) implement credit frameworks and if the levels of implementation may or may not differ based on the structural characteristics or if those differences correspond to other issues.

It also has to be said that based on this research study, there could be many differences in the implementation process of credit frameworks related to cultural issues and other institutional particularities.

Research Strategies and Procedures

One of the challenges of *comparative case studies* is properly defining the data collection procedures. In order to collect information and to develop the case studies, this research study used semi-structured in-depth individual interviews at each of the universities. Interviews were done at different levels and areas of the universities involving key informants. The interviews included people who were representative of the institution in terms of their role in the implementation of credit frameworks. This could result in a biased research; however, with the student and professor interviews, an attempt to solve this issue was made by asking them to be

more critical about the system and its implementation. In addition, the people chosen to be interviewed were chosen not only because of their role in the implementation of credit frameworks, but because of their current role or position. Therefore, some of them correspond to a second stage in the implementation of credit frameworks, meaning that they were not necessarily the original leaders of the implementation process.

All interviews were conducted by the researcher and were tape recorded with permission. The material obtained in those interviews was triangulated initially within each case study, and then among the other case studies to build a meta-level analysis. For this triangulation, information from other interviews, as well as observational and documentary information, was used and indexed according to certain probes in each kind of interview. Appendices 1 to 4 include the probes used to analyse the information from interviews, documentary information, and observations. These were:

- Main trends/drivers in the process of change (including globalization, internationalization, massification/growth, access, quality assurance, financial matters, competition/ marketization, curriculum mode 2, the knowledge society, and others)
- Main changes in the university: causes and consequences, and future expected changes
- Management practices (characterization, main changes, causes and consequences of those changes)
- Credit frameworks (understanding of it, implementation, causes, consequences, and difficulties)
- Impact of credit frameworks in management (in governance and structure, culture/values management practices and techniques, and adaptability/resilience, among others)
- Dimensions of institutional culture in relation to credit frameworks
- Key Actors involved in the implementation of credit frameworks and the resulting changes (top leaders, professors, managers, students, and others)
- Attitudes towards change with the implementation of credit frameworks (actions and reactions)
- Cultural transformations due to the implementation of credit frameworks
- Determinants of different actions and reactions (individual feelings, institutional culture, institutional history/features, and difficulties in the implementation of credit frameworks)

Similar to other studies done before on flexibility of provision (Ling, Arger, Toomey, & Kirkpatrick, 2001; Trowler, 1998a), this research study included quantitative (especially coming from documentary data) and qualitative data (coming from interviews, documents, and observations). However, quantitative data was employed descriptively rather than inferentially in order to identify structural features of the particular university in each case.

Keeping in mind the initial model of management proposed later in this paper, the in-depth interviews covered selected managerial and leadership positions in the universities:

- a. The Rector/President/Vice-Chancellor and the Vice-Rector/Vice-President/Pro-Vice-Chancellor. It was critical to include those in charge and familiar with the university administration.
- b. Representative Deans/Heads of Faculty, leaders of academic programs according to the university, or representative program coordinator according to the university
- c. Director/leader of academic and administrative planning
- d. Director/leader of technology/information/communication systems
- e. Director/leader of financial resources
- f. Director/leader of human resources
- g. Director/leader of marketing
- h. Director/leader of admissions

i. Director/leader of the registry office

People to be interviewed had either (a) experience with the design, conceptualization, or implementation of credit frameworks; (b) experience with institutional structures related to the credit frameworks; or (c) an understanding of the relationship of credit frameworks with management. However some of the interviewees could be people recently hired, in which case they could have only second hand information but nonetheless useful since they could be facing the troubles of the implementation process.

During the interview, there was an option to present certain scripts (Appendices 6 and 7) in relation to the topic to be discussed in order to introduce the conversation.

In addition, this research included in-depth group interviews with separate representative groups of professors and students. Each interview included the sections below, and each one was intended to last no longer than two hours. The four main topics were:

1. The (internal and external) context in which the credit framework appeared and the content of it. Appendix 1 was used with Rectors and Vice-Rectors (Group a). During this interview Script A (Appendix 6) was used.
2. Institutional culture and the credit frameworks (Appendix 2). This was applied during the in-depth group interviews and it was applied separately to students and professors. (March & Olsen, 2009; Olsen, 2007). Before the interviews started, Script A (Appendix 6) was read.
3. Actors and actions related to the credit framework implementation. Appendix 3 was applied to groups d, e, f, g, h, and i. During the interviews, Scripts A (Appendix 6) and B (Appendix 7) were used.
4. Dynamics of the process of change (past, present, and future) due to the credit frameworks. Appendix 4 was applied to group b and c. During the interviews, Scripts A (Appendix 6) and B (Appendix 7) were used.

The models of the interviews were based on the idea that they were just initial questions which were semi-structured and where interviewees' narratives were very important. Based on the work of Pawson and Tilley (2004), this research study used realistic interviews, which were interviews in which it was possible to reveal understandings about contexts, mechanisms, and outcomes. In addition, the interviews in this research study were based on a realistic model, and were primarily theory-driven, using possible relationships identified in the literature between credit frameworks and management. However, during the process of interviewing, those interviews became more and more driven by both theory and real practice.

Following Yin (1984), this research study recommended an additional source of information by using documentary and archival data⁴³. Documents were chosen according to accessibility, precision and completeness. In particular, this research used documents on institutional strategy, academic and administrative policy, academic credits design and implementation, and impact assessment and evaluation from 2000 until 2010⁴⁴. This type of information was requested from each institution or obtained through the institutional web page. It included mission statements, institutional education projects, institutional planning documents, meeting proceedings from directive committees, as well as correspondence and institutional studies done in the past. Any existing and available institutional accreditation documents presented to the CNA were also requested and used.

⁴³ Good examples of this could be found in works like Deem (2005b), Allen & Layer (1995) and Marginson & Considine (2000b).

⁴⁴ It included information from the years 1998 and 1999 in order to see the antecedents of the credit framework implementation.

The documentary data was used before and after the interviews. Before the interviews, a review was performed of all the documentary information, which is public, including the information reported to the CNA (national agency of high quality accreditation). These included the documents illustrated in Appendix 11 and organized according to each University.

During the visit to each university, a request was made for additional information on policies and implementation reports of credit frameworks. All of this information was organized according to the probes (explained before) and also was organized to see the main moments in the history of the implementation in each university studied.

The third source of the research included observant information, which were notes, general views, and ideas taken during the university visits (Trowler, 1998a). This source was developed in an unstructured way and was based on a journal kept by the researcher at all times. The researcher collected notes in the journal from informal conversations and from researcher observations gathered at meetings and other types of encounters. The researcher recorded ideas, impressions, and analysis and always attempted to answer the question, “*What am I learning? And how does the case differ from the last?... (About the notes)*” (Eisenhardt, 1989, p. 539). The kind of things I obtained were hunches, hypothesis about relationships, first impressions, informal observations, and anecdotes, among more.

The information of observations was included also in the information organized according to the probes and checked in relation with the interviews and documentary analysis.

Data Analysis Procedures and Study Limitations

The methodology used in this research study included the required stages to generate new insights and ideas from the data analysis. Based on Eisenhardt (1989) and Pettigrew (1997), the stages used for the data analysis are described below:

- *Within case analysis:* This part implied a detailed study in each of the universities in order to obtain institutional patterns to be compared. To do this, the researcher studied together the interviews with the documentary and observational data. The researcher began by initially trying to identify the history of the institution with the implementation of credit frameworks, secondly considering the special features, culture, and context of each case and its impact on the implementation process (including causes), next studying the main actors involved in that process and their role, actions, and reaction in relation to the implementation of credit frameworks, then considering the main changes in management, and finally the main difficulties in that process. In order to do this part the research used a group of matrices (Appendices 12 to 29) and tables which helped to understand, in a didactic way, each case study in different issues such as relevant moments in the implementation of credit frameworks, purposes and understanding of credit frameworks, main determinants, micro context, main impacts on management, role of key actors or protagonists.
- *Cross-case search analysis:* This part implied comparing the different individual cases in order to find comparable patterns. This meant identifying similarities and differences between each case study and defining categories and patterns to be compared among the cases, shaping a meta-level analysis. The probes presented earlier in this chapter served as those categories.

In this part, the researcher was also able to *shape hypothesis*, which implied using the common patterns found in the sample as well as dealing with the possible causes, which have shaped the patterns, observed. These hypotheses included topics like: credit frameworks as a cause or consequence of management, the main internal

and external determinants (drivers) in the implementation of credit frameworks, and the main managerial consequences of this implementation. Those hypothesis were analysed using certain matrices, figures and tables (Tables 1 to 8 and Figures 1 and 2) which studied issues on the dynamic of the process of implementation, main determinants, cultural and managerial transformations, main common impacts and the kind of actors actions and reactions due to this process of change with the implementation of credit frameworks.

Finally, this part related the cases with the literature review done in chapters 2 and 3 and in order to do a *theoretical validation of the hypothesis*, which implied linking the theoretical and empirical findings across the cases with the existing literature on the topic. In this part, the proposed conceptual framing was challenged. Finally in the conclusions comments were provided about the future perspective of this issue in the Colombian higher education sector

Finally, the interviews and observations at each university were expected to last for a period of time between 2 to 3 days. The interviews were conducted in Spanish.

Regarding study limitations, the research relied on the institutional view (view of university directors and other leaders) rather than on just the academic view (faculty, department, or school level). In addition, given the dynamics of the university management and the reality of systems being a constantly moving picture, additional changes may have occurred even in the short time frame between the time the research was conducted and the publishing of this study (Marginson & Considine, 2000b).

Ethical and Legal Issues

Regarding the ethical and legal aspects, the research study took into account what is expressed in the literature. Pettigrew (1990, 1997), for example, warns researchers about “*issues in gathering and using highly sensitive information about long-term processes of strategic choice and change...Researchers are clearly engaged in a craft process with ethical requirements*” (Pettigrew, 1990, pp. 285, 286). This study also follows similar requirements included in the Ethical Guides for Educational Research created by the British Educational Research Association.

This implied taking into account issues like the right to use the names of the organisations studied⁴⁵, the anonymity of respondents, the free choice of participation for all the respondents, reciprocity in the use of information, confidentiality of the interviews for all the respondents, and the use of the results (publication issues).

Before each visit to the universities included in the sample, the researcher signed a Confidentiality Agreement with the Rector of each university (Appendix 5 and Electronic Appendices including the actual confidential agreements with Universities A, B, and C). Based on this document, the researcher was required to respect the confidentiality of methods, procedures, documents, clients, and activities given to him, unless the information was publicly exposed and shared with society by the institution. In addition, the researcher guaranteed not to use the name of the universities (except when choosing them, but not in the results of the research), and to share with the university the results in a workshop, lecture, or dialogue after fully finishing this work.

⁴⁵ Marginson and Considine (2000b) recommend not giving the name of the institutions included in the study. Based on this, the research did not use the names of the institutions studied except in the description included in the research methods chapter. Therefore, the findings chapter refer to the universities included in the samples as universities A, B and C

The researcher explained in detail the scope and interest of the research study to be done to the Rector. Based on his approval and once the document was signed, the researcher started the interviews with the Rector and then with the rest of the community.

All the participants also signed a voluntary participation and informed consent document in which the researcher guaranteed anonymous participation. Each of the participants voluntarily signed this and some of them voluntarily withdrew from the research (a right which was included in the voluntary participation and informed consent document). In addition, all the people included in the interviews were adults and the researcher did not accept participation from students less than 18 years old.

To identify the interviewed people, the researcher used only positions or roles but never the name of the participants, even when signing the voluntary consent participation and informed consent document (see electronic appendices with the actual confidentiality agreements with Universities A, B, and C.)

An important issue regarding this matter was that the majority of the participants positively responded to the use of these ethical practices, which unfortunately, is not always the rule in Colombian higher education research practices. In fact, many of the participants asked for details about these practices, learned from them, and are now using them.

An additional issue to be mentioned is the possible ethical issue in reference to the researcher personal relationship with the Rectors of the three institutions included in the sample. It has to be said that there is such a relationship. This helped to open the institutions to any questions and possible interviews without any troubles; however, this could also have minimized the expression of troubles or difficulties with the implementation of credit frameworks, more in the case of recorded interviews. However, even though this could have happened, the researcher found a very open expression of difficulties in the interviews even coming from the Rectors. In addition, it has to be said that during the interviews with students, deans, administrators, and professors, many of the difficulties appeared clearly even in institutions in which the researcher has a closer relationship with the Rector. Finally, during the interviews with Rectors, Vice-Rectors and Deans, difficult concepts and analyses came about which were not recorded as requested by the interviewee, but those comments were included in the observational data captured and provided by the researcher.

Chapter 5: Findings

This chapter presents the findings of each individual university. As explained in the previous chapter on research design, three universities with varying degrees of complexity and interests (offering different subjects, some research-oriented, some teaching-oriented) were considered in the study. All of them were initially studied individually and then based on the three cases, a cross-case analysis was done. In the individual part, this research study analysed the university's concept of credit frameworks, the main causes for its introduction, and finally the managerial consequences of the introduction of credit frameworks. Within the analysis of the managerial consequences, this study explored how different institutional cultures, different actors, and particular institutional features related to, diverged, or changed the managerial consequences.

In the next chapter, a cross-case analysis is developed in which there were identified patterns, variabilities across different contexts, and reasons which could explain those differences or common patterns.

The Case of University A

University A is a confessional private university founded over 40 years ago. Although this university was not founded by a religious order, it is organized using traditional Catholic principles and is focused on social sciences and engineering. The most traditional disciplines offered by this university are law and engineering; however, it is clear from the visit and notes taken during the interviews that today engineering seems to be the most important faculty and the one which the majority of the people recognize as the paradigm to be followed in the university in academic terms.

Another characteristic of the institution is that during the last 5 years it seems to be in a very deep process of change. Prior to that, the institution had a very strong and active President (highest authority of the university). However, in the last 5 years, the president seems to be in a process of delegating his power to the next generation, although he remains interested and informed about the advancement of the university. In this change process, the current Rector has had to take on the tough work of the transformation, including removing certain deans, changing managerial practices, and seeking external advice on new or better academic practices. This change process started based on the need to overcome a financial crisis and to attain higher standards of quality, which were under scrutiny due to maintaining a very traditional academic model for more than 30 years. One of the main changes has been a doubling of the number of students during the last 10 years. This process of change currently has internal enemies and some animadversion that has generated some worries, as well as institutional disorder and "noise" in the administration. Of course this situation is more explicit when talking to the students, professors and directors rather than those at the executive level.

The university is a teaching-focused university and develops very limited research. It is a non-profit foundation and some of the founders participate in managing the academic and administrative issues of the university. As of the writing of this research study, the student population was nearly 13,000 students with 93% of these students at the undergraduate level. An important aspect of the university is that it has a remarkable amount of students who work in the day and study at night (from 6 PM to 10 PM). This fact makes it very difficult for the students to complete independent academic work, and undermines a realistic implementation of credit frameworks in which the student is the protagonist in the process of learning.

Relevant moments in the implementation of credit frameworks

Appendix 12 summarizes in a linear mode, the main moments in the implementation of Credit Frameworks in this University. Based on this data, at least three different periods of time can be identified. The first one is from 1998 to 2002. In this period, new deans were selected (as a result of change that happened in the university). In this period, University A was perceived as a traditional model, centralized, without institutional academic policies and with a lack of teamwork among the different faculties and departments. Interviews with the most traditional professors (the ones who come from the past administration), revealed that although viewed the state of university under the traditional model as very positive, they understood the recent process of change could be useful for the university although was not yet finished. During this period, it is important to highlight the leadership of the Faculty of Engineering, which was pushing to move forward with the new trends in higher education including the discussion about the importance of an academic community and the involvement of university A in the process of accreditation. These two trends were the main determinants in the second period of time.

This second period of time that could be identified was from 2003 to 2006. During this period, the institution started to improve in quality in order to accredit some of the academic programs offered in addition to preparing a curricular policy and a curricular discussion among the new academic community. This period of time could be characterized as a moment in which the university prepared itself for the implementation of credit frameworks, including new rules and norms for the approval of academic programs, and new internal regulations related to flexible curricula, students and professors.

The final period of time identified was from 2007 to 2011. It started with the official implementation of credit frameworks including a modified academic architecture for each of the programs offered by the institution, a new and unified student regulation for the undergraduate and the postgraduate programs, and training programs for students and professors about flexibility and credit frameworks. Although this period of time was full of written policies about the credit frameworks, it seems the change was moving “top-down”. The new policies were still very centred on the deans and directives but quite unknown for professors and students. One of the academic managers interviewed described this to me as a “process of change still in process,” in which academic credits were even a new topic for some of the students interviewed.

It seems that a new period of time started in 2010, the year in which, as expressed by the dean, there was a jump from traditional “action plans” of one, two or three years to a “development plan” which goes from 2010 to 2019. This plan includes an invitation to improve the implementation of the credit frameworks and accepts that something must be done, given an internal study conducted in 2010 in which professors and the academic community pointed out the weaknesses to be solved in this process of implementation.

Concept and purposes of credit frameworks

Based on the kind of answers given by the people interviewed and also through the issues recorded with the observational and documentary data, we can see that the real implementation of credit frameworks differs substantially from the expectations written in the official documents of the university. In other words, the official written expectations were greater than the actual results.

The official documents of the University explained the credit framework as a mechanism to achieve the following:

- Openness (the possibility for the programs to interact and be nurtured by different external experiences, programs and best practices in academic and management issues);
- Curriculum flexibility (which for University A allows the student to receive different experiences and alternative possibilities in their process of education);
- Student mobility (which give the students different routes in an academic program and interdisciplinary approaches);
- Connection between different levels of education (for example the connection and sequence between undergraduate programs and postgraduate programs);
- Competitiveness (with other universities);
- Relevance (to society and the environment).

In addition to this, the university has developed many documents and written policies. In particular the last two Academic Provosts of the institution could be characterized as the main actors and protagonists in this change process of the implementation of credit frameworks. This has resulted in the implementation of the subject catalogue, the subject design policy, and new web and IT tools that facilitate the process of learning issues or the academic administration of the university. Therefore, theoretically the credit framework was built taking into consideration the teaching hours and the independent student hours involved in learning. This mix was also defined in the documents according to the competencies expected from each of the programs. Each program also had compulsory and elective subjects as well as institutional subjects related to science and humanities. Based on this framework, University A could allow double degrees, and this is managed by an internal Institutional Curriculum Committee and implemented by a Faculty Curriculum Committee, which do not operate properly in all of the Faculties. Another factor in the implementation of credit frameworks, considered in the policies, is the university evaluation system and a tutoring program for the students.

However, when we move from interviews with the Rector or even Vice Rector to the rest of the community, as identified in Appendix 13, the purposes of the credit framework identified are more related to a response to legal requirements of quality assurance and a strategy to promote internal mobility of the students.

Academic credits correspond to some paradigms the Ministry of Education designed some time ago...with the purpose of enabling measurement of higher education at the undergraduate level...it was implemented following a law... (University A, Tape Recording No. 8, Professors).

The current implementation of the Credit Framework at University A could be characterized more as a mechanical model based on a numerical definition rather than a conceptual one, with weak implementation as expressed by students, professors and directors. This could be ratified in the study recently done (2010) by the institution under the title “The System of Academic Credits at University A- Antecedents and Projections” in which they recognize the process of implementation is still weak and has issues to be resolved. In terms of the perceptions included in this internal study, students say they did not know about the credit framework before going to the workshops designed in the study. The kinds of problems identified in the study (Universidad A, 2011) include: the existence of general policies and rules but aspects lacking in the implementation process, great advances in academic matters but difficulties in the administrative implementation of credit frameworks (difficulties in logistics, central planning and financial issues), and the absence of professors and students during training in the process of implementation.

In conclusion, still there is a need to further the implementation of the credit framework, using the important advances of University A in regulatory terms but being more concerned about the real understanding and the real needs of the students in this process. As an example, the Academic Provost, when interviewed, identified the double degree possibility as something the students are not interested in. However, when interviewing the students, they expressed that the

double degree possibility was very important for them, and thus this could be one of the most important consequences for students of the implementation of credit frameworks.

University A's current credit framework model is strongly focused on internal mobility and regulatory responses to the need of more quality assurance recognition in the country. In conclusion, University A's model still requires going deeper into the possibilities and alternatives offered by this framework in terms of quality and internationalization.

Main determinants in the implementation of credit frameworks at University A

This part of the study describes the main determinants of change that have been experienced by University A. Based on the information studied in the case, during the last 10 years University A has experienced at least three main determinants of change. The first corresponds to national and international pressures. The second corresponds to important changes in terms of regulations, norms, and policies established by the government. Finally, the third determinant comes from a situation of financial distress experienced in the early 2000s. All of these issues have forced University A to implement radical changes in academic community management and implement new strategies and tactics to build a professional community of professors. The intent was to build a strong academic community for the future of University A and to be able to deal with new policies such as the one on flexible curriculum.

As described by the people interviewed, University A initially had a lot of work regarding the reality of new regulations and new national policies on teaching, research and community services. As expressed by the dean, in 1998 the government started to implement new academic rules that forced a process of change within the university in order to answer in a more unified and institutional way. That change was initiated by three faculties who understood the change and started to do something (Faculties of Engineering, Psychology and Architecture). Prior to this, the national process of accreditation of high quality was an important topic in the country and many universities had already reacted. However University A, had decided not to react yet, according to the previous Rector.

The second determinant for change experienced by University A, were international pressures. These pressures were internally encountered by deans and directives, and were also based on the knowledge about higher education received from abroad through international contacts of the academic and administrative community of University A. These international pressures had to do with the implementation of a flexible curriculum policy or even the introduction of credit frameworks. The use of these international references and ideas has resulted in the better implementation of those policies and strategies.

Dealing with the methodology about the curriculum revision, we started studying local, national and international benchmarks...that study had to be in Europe, Central America, North America and South America (University A, Tape Recording No. 3, Dean).

One of the consequences of the international pressure determinant has been the need to increase mobility at the student and professor level. Today, it is quite important in terms of internationalization and particularly the demands from abroad to have more possibilities for student exchanges and double degrees. University A has found it is easier to meet these demands with the implementation of the credit framework.

In addition to this, a similar determinant comes from national pressures by other higher education institutions in the country or respected thought leaders on many of the issues faced by

University A. As an example, in 2005 and 2006, Universidad Nacional de Colombia (the largest and most important public university in the country) implemented credit frameworks. The Academic Provost of University A stated that this case was studied in depth at University A, that it was one of the most important sources of information and knowledge regarding the implementation of credit frameworks, and that it put pressure on University A to also implement credit frameworks.

An additional national and international pressure was the topic of accreditation. The Rector expressed a deep debate within University A that had to do with whether the institution would or would not increase quality assurance through the process of accreditation. The idea behind this is that accreditation is the best way to have accountable universities, and this accountability contributes to higher quality.

On one side of the debate, the former Rectors were against accreditation, since they believed the accreditation would detract from the institutional autonomy (a principle well-respected and defended by the whole higher education system in Colombia). On the other side of the debate, the new Rector and some of his team defended the decision to pursue accreditation as a way to acquire a better reputation and increase competitiveness. They argued that a non-accredited university, or at least an institution that did not begin to seek accreditation, would surely fall behind.

The determinants of the process of change were external. We started to see that if we were not able to take part in the quality accreditation process we were going to fall behind...(about credit frameworks) the first steps were timid, but the quality accreditation process showed us that if we were not able to go deeper on it, we would not be able to compare our programs with the world and with international universities and promote mobility in a proper way (University A, Tape Recording No. 1, Rector).

The last determinant of change was a problem of financial distress faced by the University A around 1999⁴⁶. By this time, the institution had less than 5.000 students, was facing a slow or even zero growth, and still operated in a traditional model. For many, it was clear that change was required. The decision taken in 2003 was put into place to allow more institutionalization processes in order to control costs, reduce costs via economies of scale, increase the number of students, and allow more integration among faculties and academic communities to increase those economies of scale. Today, University A has more than doubled the number of students and although their finances must still be very carefully managed, they are in a more stable financial position.

When the main reasons reported by the interviewees for the implementation of credit frameworks were analysed (See Appendix 14), all reported similar topics especially related to student mobility and a particular regulatory process related to quality assurance demands (which include the credit framework implemented in the whole university).

All of these issues resulted in University A developing an important process of transformation which started with the strengthening and consolidation of the academic community. Since 2001, University A has included in their action and development plans topics such as the role, selection, hiring and assessment of professors as a pivot strategy to strengthen research, institutionalize a culture of quality, improve welfare strategies, modernize the academia and develop a policy on flexible curricula (including the implementation of credit frameworks starting in 2007).

⁴⁶ In this year the country itself experienced a critical economic situation, which also affected the whole university system in the country. Many universities had to confront delicate financial matters which made some universities in the country unsustainable.

The particular micro-context at University A

What was clear from the research done at University A is that the university itself is in a process of change. It is experimenting (as expressed in Appendix 15) a managerial and cultural transformation that includes an important process of building institutional policies, a more centralized and accountable management, and an open and change-oriented culture. It has included the use of a planning culture and external advice. Of course, it has also brought conflicts and differences that still exist at all levels. In particular, the research found a particular difficulty in that some professors are strongly in favour of certain changes, and other professors are still strongly against these changes (including the credit framework).

In terms of the implementation of credit frameworks (first designing the policy and then implementing the system since 2007), the organizational changes described above have helped University A deeply in the implementation process.

In fact, University A has succeeded in designing very specific and complete policies about credits and the curriculum. In addition, the development of institutional tools like an LMS (Learning Management System) and an academic web platform have been very useful and considered by students and professors as key elements in the implementation of credit frameworks.

In terms of the managerial model, a proper implementation of credit frameworks requires a central policy in addition to more institutionalization of processes, methods, and organizational issues. As expressed by the dean, this has been the reason why the Faculty of Engineering at University A has been the leader in the implementation of credit frameworks. This Faculty has proved to be more modern, open to change, team-oriented, and a rigorous follower of the institutional policies on curriculum and credit systems.

In terms of the cultural transformation, difficulties emerged in the process of implementing credit frameworks. As expressed by the Rector and the Academic Provost, University A is slowly coming from 30 years of tradition, old deans and professors, a “Presidential Model” of leadership (in which one person was the most important decision maker) and a particular kind of “friendship hiring method” to hire professors⁴⁷. This is still in a process of change since the long tradition is difficult to transform. The problem is that many of those traditional professors are those who are in charge of the implementation of credit frameworks. That is why this process heavily depends on the deans’ interest but also on certain faculties where the academic community has been more transformed.

The Credit Framework is something that appeared from one time to another...Definitely this is a cultural change which is related to the administration, the leaders, professors and students. Cultural changes are not easy, they are complex, and while you find positive things you also find negative ones....This new culture (at the faculty of engineering) has implied that we are not anymore an island. We belong to an academic community (University A, Tape Recording No. 8, Professors).

Finally, the move in University A from lower levels of control and accountability to a culture of more institutional planning and accountability has helped in the process of reinforcing the

⁴⁷ This implies that the “old” deans used to hire full and part time professors who are close friends or who become that. The idea is to build a community very close to the Dean, with less importance given to other objective characteristics.

change towards credit frameworks. Currently, University A is evaluating the implementation process and is taking action to address issues in the credit system that will help in the future.

The impact of credit frameworks on the university management

Appendix 16 includes the main impacts on university management due to the implementation of credit frameworks. All the various actors involved in the study, including not only the directive staff but also students and professors, saw a remarkable change in the information systems. They all saw two new systems, one on the academic side (the web academic platform) and the other on the learning process side (the new virtual learning environment). In addition to this, some of the people interviewed highlighted the importance of those new systems for the new budget policy and financial system. What is clear is that University A has achieved a significant transformation in terms of its information systems that has made life easier for many in the university.

The other three main transformations included a cultural change, more institutionalization and integration among different faculties and departments, and finally, new ways to administer the infrastructure. Those changes were partially seen by students and professors, which mean they are still in the process of transforming the university experience. As expressed by the Planning and Quality Assurance Manager, “the process of change is still not finished,” and many of these changes have weaknesses in the planning-implementation process. As an example, the cultural change is still seen by the Rector as a “big challenge” and he believed that there still exists a need from people from outside to help in this process of cultural change.

The majority of the staff and professors considered the transition to a more institutionalized and integrated academic and administrative management as one of the most important results in the implementation of credit frameworks. The means to attain this were through the new policies, rules and regulations as well as strategies to strengthen the academic and administrative community and building new ways to work together.

Regarding institutional coordination procedures, we now have an organization and methods unit which guarantees we have standardized procedures and unified criteria as a consequence of credit frameworks implementation. (University A, Tape Recording No. 5, Director of Admissions, Registrar and Control)

Proof of the changes described above can be seen in the Faculty of Engineering that has played a crucial role and has been a key determinant in this process of implementation. As expressed by the dean, the Faculty of Engineering has been the role model when implementing the credit framework. It has been able to rationalize the number of professors, to get more efficiency from full-time professors and to increase the central control and assessment of the professor's workload. This Faculty has offered to the directive staff two key arguments in favour of the implementation of credit frameworks: the possibility to be economically more efficient (and get economies of scale), and to improve the quality of professors and their academic activity.

The other significant change has been the new management of the infrastructure. This change redefined the academic groups and modified the traditional way of building the new infrastructure and classrooms for the institution. Additionally, it has made the institution rethink their spaces and architecture. Finally, it has resulted in better decision making for future infrastructure growth, smarter student and professor allocations, and more effective planning for quantity and quality of resources and sizes.

A Dean of University A stated:

...(With the introduction of credit frameworks), there is a different view of the university management...now the university has started to discuss efficiency in the use of the infrastructure (buildings), the optimal population of students, growth, and spaces for the community (University A, Tape Recording No. 3, Dean)

During the university visit, the researcher could physically see at least three different ways to build the buildings at the university and explored this topic with the students to see if the students viewed this as a representation of changes due to credit frameworks at the university. Some buildings allow teamwork by providing cooperative spaces used in credit based programmes (round tables, moving seats, small group places at the library) while the old ones represent the traditional class of one professor at one side and students in front of the professor). Some students did not see the difference yet, since for them the new buildings were just the ones they have had always (during their time at University A), or these buildings corresponded to other faculties.

A final group of changes came from new academic practices or services. These included the implementation of a very complete and well-designed tutoring program, which helps the students in their process of deciding the subjects to be taken. In addition, the tutoring program is also useful for students when organizing their curriculum and deciding how to arrange their study plan each semester. The other important new service, which is a remarkable good practice, is the implementation of a subject catalogue. This model has helped University A to properly inform the students about the subjects, professors, classrooms, syllabus and logistics in the academic organization of the study plans. Finally, it is necessary to mention the new processes of hiring professors and defining their salary. From the conversation with the Rector, this process includes fewer teaching hours per professor and more quality and less quantity of professors. However, when talking to the professors, the credit framework changes have implied more non-paid workload and this was still generating a passive conflict with the implementation of the framework.

One of the most important changes has to do with the professors' management policy, especially how to measure professors' activity in terms of student academic credits...this is important because (with the introduction of credit frameworks), the professors' work grows and more personalised attention to students is needed. The way of hiring and professors and contract management has also changed (University A, Tape Recording No. 8, Professors).

In summary, the majority of these changes do not come easily; on the contrary, they all come with contradictions and difficulties. The next section provides a deeper look into this topic.

Micropolitics in the implementation of credit frameworks

In terms of the attitude towards change at University A, there is still more scepticism than enthusiasm for the implementation of credit frameworks. When characterizing the community (in Appendix 17) based on the work done by Allen and Layer (1995) about actors' reactions to the introduction of credit frameworks, what is clear is that senior managers and leaders tend to be more enthusiastic and pragmatic about the important role and results due to the implementation of credit frameworks. The reason for scepticism from the other groups comes from worries about false expectations. As expressed by the marketing coordinator and even professors and students, for them, the framework is still not fully seen as a useful tool for many of the university actors.

In fact, the University developed a study in 2010 about the implementation of credit frameworks based on focus groups composed of deans, professors, students and the administration. They

found that different stakeholders recognized changes and progress in the documentary guides and policies but they still reported problems in the implementation of those policies and rules. They found weaknesses on the administrative and managerial side of the implementation and problems with academic planning and logistics. University A has identified some key challenges and improvements needed. These included more active participation of students in this process of change, strong directive leadership in the process of implementation, improvement in certain expected results of credit frameworks (such as student mobility and double degrees), and a better training program for professors.

There are two particular difficulties that need to be taken into account. The first of the difficulties had to do with structural impediments to the implementation of credit frameworks. The Director of Human Resources described one of these impediments as resulting from the institutional decision to take part in the accreditation process (quality assurance accreditation). The idea is that the changes and difficulties of the change process with the implementation of credit frameworks could be an obstacle in attaining the accreditation (because those difficulties and controversies would emerge in the surveys and self-assessment report). Another related impediment was the unexpected or unknown financial impact of the credit framework implementation, which at present is still a major topic of concern for the leadership of the institution.

The second difficulty was related to the problem of charging fees in a credit framework structure, where each credit determines the amount of fees paid by the students. The problem is that students learn about the system and try to optimize credits taken while trying to minimize their fees. Alternately, especially students who work during the day and only study at night might try to minimize the number of credits taken each semester. This could result in a reduction of income for University A that could cause serious trouble in the implementation of the credit framework. The fee issue creates a more complex environment for credit framework implementation at University A. University leadership felt that this issue needed to be solved in order for the implementation to succeed; otherwise it could be an important vulnerability given the particular features of this institution.

The Case of University B

University B is a prestigious private university and non-profit foundation that was founded more than 350 years ago by a visionary and renowned monk of that time. The educational emphasis at University B has been to attain excellence in teaching, while preserving humanism and ethical values in the model of education. Currently university B is one of the Higher Education Institutions (HEIs) accredited for its high quality standards. It is nationally renowned due to its teaching, community, and social services. It is also renowned for its unique model of governance in which the current undergraduate students elect the Rector every 4 years and take part in important decisions at the university such as the election of the Board of Directors.

During the 1980s and 1990s, University B experienced a radical transformation in which they sought to move from a teaching oriented university towards a teaching university with research prestige. There were at least two reasons this path was taken. One was the interest in preserving the reputation and relevance University B had in the past, and the second reason was to respond to financial sustainability pressures. The problem faced by the university in the late 1990s was that the new generation of higher education students found the university less attractive due to its entrenched image of historical tradition. It was a university living in the past and not looking towards the future. In other words, the image of the university was perceived as an antique more than traditional. During the last 15 years, University B has improved in research, quality assurance and internationalization while at the same time it is experiencing important growth, which is transforming the previous culture of a small and personalized higher educational experience (Universidad B, 2010a)

At the time of writing, the student population was nearly 13.000 students, with approximately 60 per cent of these students at the undergraduate level. The university is focused on the fields of social sciences, economic sciences, basic sciences, and health sciences including medicine. Beginning in 1990, University B developed a well-executed and structured process of strategic planning and control. The plan included four courses of action: academic strengthening, financial and administrative strengthening, and technological development. Approximately 15 years later, the university added to its plan internationalization and building an academic community as new institutional objectives. According to its vision, University B is committed to increasing mobility, promoting curriculum internationalization, institutional and academic flexibility, innovation when designing programs, relevance (to societal needs), and important use of information technology (IT) tools. (Universidad B, 2010a, 2010b))

University B defined a strategic plan from 2004 until 2019, which includes in one of its chapters a curricular and pedagogical transformation. This chapter describes a particular change related to the curricular management. One of the key aspects highlighted, as strength during the institutional accreditation process of high quality was the development of the university in terms of curriculum management, flexibility, and the implementation of a well-defined policy in relation to the curriculum management.

Relevant moments in the implementation of credit frameworks

Restrepo (2008) identifies two main waves of change at University B in the implementation of credit frameworks. One corresponds to the period of 1997-2001 and the other one from 2002 through the present. Both periods are transversally included in two strategic plans (one in 1998-2003 and the other from 2004-2019) and have particular characteristics in relation to the implementation of credit frameworks. The first wave of change worked on the conceptualization and initial implementation of the framework, and the second wave worked on the consolidation and cultural appropriation of it.

Based on the research interviews, a third wave of change can be identified in the late 1980s and the early-mid 1990s. This period of time prepared fundamental aspects for the implementation of a curricular reform and therefore the credit framework itself. Of particular importance were the process of building a quality assurance culture, the growth of a planning culture (related to the later implementation of two strategic plans), the importance and efforts given to the new orientation to research, and the way University B increased the number and quality of their academic community. All of these aspects, which happened in the 1990s, were important building blocks for the implementation of credit frameworks at the university. The Planning Director stated:

The credit framework has been one of the fundamental issues in the transformation of the university from a teaching oriented university to be a teaching university that also prioritizes research... (University B- Tape Recording No. 7 Planning Director)

Those building blocks also helped to implement the credit framework years before the local authorities in Colombia defined the national regulation for academic credits. In fact, the policy of the country comes from 2003, but University B established their system for the first time in 1999.

Based on these antecedents, and using the data in Appendix 18 that includes the relevant moments in the implementation of credit frameworks at university B, it is possible to understand the next two waves of change. During the period of 1997-2001, the credit frameworks were introduced (1999). The reasons for this were to attain higher quality standards, improve the internationalization process (especially regarding mobility), achieve greater flexibility, promote

more choices for the students, allow double degrees, seek answers to access and equity problems, and transform the students' learning - teaching experience. As part of this curricular transformation, the university developed a training program to involve the professors and make them aware of curriculum development strategies and tactics. During this period of time, a "Credit Framework Overseer Committee" was created and it was in charge of designing the curricular policy and defining strategies to get more flexibility and openness in the academic programs. Additionally, criteria regarding the credit framework were defined and policies on curriculum assessment and control and program approvals were established. The curricular policies were defined in 1999 and this period ended with the implementation of a new information system to administer the framework. The Quality Assurance Manager described this new policy in the following way:

The curricular reform in the case of academic credits has, what is a credit?, why credits?, how to offer a subject with credits? And which methodology is needed to teach. (University B- Tape Recording No. 9 Quality Assurance Manager)

The final wave started in 2002 and is expected to end in 2019. During this wave, a new curricular reform was implemented hand in hand with the decision from the university to take part in the process of accreditation (institutional and program accreditation of high quality standards), as well as amidst growing integration concerns from the undergraduate and the postgraduate academic programs. The new policy established in 2004 defined important mechanisms such as institutional and program committees to monitor the implementation of credit frameworks and helped to institutionalize this process. In addition, the policy defined a curriculum assessment mechanism, and guides to help in the process of program transformation related to the curriculum.

The Rector and Vice Rector expressed the result of these transformations, when they spoke about the particular importance of credit frameworks as part of the essence of the new university:

The credit framework transformed the essence from the university...fundamentally the change is related to the new role exerted by professors and students within the process of education...The student receives more responsibility and the professor becomes more strict with his/her knowledge building commitment... (University B - Tape Recording No. 1. Rector)

Although, based on the last paragraphs, it seems to be that credit frameworks have been perfectly implemented at University B, when talking to students, deans, and professors, it is clear that this is still an unfinished process of change, which will be described in more detail in a later section.

Concept and purposes of credit frameworks

As could be extrapolated from the documents and interviews, the concept of credit frameworks at University B goes far beyond the idea of a normative or regulatory procedure established by the government. Although at the beginning of the implementation of the credit frameworks professors stated that it was a very basic and quantitative idea, with time it has become an important process of transformation and a structural issue at the university. Nowadays the professors say the implementation of credit frameworks can be related to particular advances of the institution in terms of interdisciplinarity, flexibility, learning strategies, management, profound pedagogical changes and students' autonomy. They even describe the credit

framework as a collective learning process for students, administrators, directives and professors, from which the university can derive advantages to become a better institution.

Except for the students who did not see the long-term picture of the implementation of credit frameworks ⁴⁸, the entire groups of stakeholders interviewed which included Rector, ViceRectors, Deans, Professors and Top academic and administrative positions (Appendix 19) shared the idea of the credit frameworks as a deep transformative mechanism. The majority of them stated it was one of the causes of the curricular reforms which happened in the institution twice during the last fifteen years. In addition, the majority of them saw the credit framework as an important process towards the internationalization, quality assurance process and growing relevance expected to happen in relation to the academic programs of the university. It was uncommon to find basic merely technical ideas about the credit framework, whether talking to the professors or to more junior administrators.

Another important understanding of the credit frameworks was its role in the institutional purpose of growing with quality established in the development plan of the university (2004-2019) (University B, 2010a). This plan defines as one of the main goals of the university to attain “development with quality and identity,” which means quality is a key criterion in relation to growth in programs (new undergraduate and postgraduate programs and more integration between them) and more pertinence and relevance of the educational programs. One of the strategies to build growth, quality is the curricular and pedagogical transformation, which includes more flexibility and the use of new methodologies in order to improve student autonomy in learning. In addition, the implementation of credit frameworks is also related to increasing internationalization including more exchange programs for students.

What was most interesting was the fact that the majority of the people interviewed actually saw the importance of credit frameworks in enabling the university to grow while maintaining and enhancing quality. They provided examples like the one in the Faculty of Law in which, during the last 10 years, the number of programs had grown from five to twenty and the students from 104 to 2.000, based on the advantages of a properly implemented credit framework.

In conclusion, the credit framework in this university had become an important reason for the institutional process of change, but also a consequence of a deeper transformation that occurred in the 1990s at the university.

Main determinants in the implementation of credit frameworks at University B

During the last 15 years three determinants appear in the process of change and the introduction of credit frameworks at University B (see Appendix 20 for more details). The first determinant was the institutional interest in building a more competitive university that appeared in the 1990s and has been developed during following years. The second determinant was a growing concern and related actions to guarantee and implement a quality assurance culture at the university. The third determinant was a deeper understanding and implementation of an internationalization process.

The interest in being more competitive could be described as a survival strategy implemented by University B. This survival strategy was well defined by many of the people interviewed as a way to overcome the poor number of students interested in the university in the 1990s, the declining institutional and program reputation, and the financial distress. The result was the need to implement a strategy through which University B could be relevant for the future in the Colombian and regional higher education sector.

⁴⁸ Since they have stayed not for too long at the university and the majority of them has lived with the new frameworks of credits and hasn't seen the picture without it.

The main drivers of this change have been a well-defined process of academic strengthening and a consequent process of growth in quantity and quality of academic programs. The academic strengthening included an important increase in the number of professors as well as improvement in their education levels that increased the proportion of doctorates and fully qualified academic staff. Connected to this was the decision of University B to transform itself from a teaching university to a “research & teaching” oriented university. University B was also interested in general in being part of the process of creating knowledge and not only distributing it, as a way to be competitive. One of the Directors expressed the change in the following way:

University B has changed from a small and closed university to a large, open, and diversified university (in terms of its programs), which has invested in research and social activities in order to transcend into the future. (University B, Tape Recording No. 4, Deputy Director of Finance)

Finally, the last driver of this sub-path to competitiveness included the design and implementation of a curricular reform, which has included objectives such as curriculum institutionalization, an academic credit system, more flexibility and interdisciplinarity.

The other driver that also explains an interesting institutional dynamic is the growth of University B in terms of the number of academic programs (including postgraduate and undergraduate), the supply of which more than doubled at University B in the 1990s. The idea was to be attractive to a growing number of potential students and allow them opportunities such as double degrees. In addition, this also meant the possibility for the university to offer more postgraduate programs (master and doctoral programmes), following the institutional decision to improve research and knowledge production.

As mentioned above, the second determinant in the process of change at University B was the importance given to quality assurance. This has resulted in a harmonious process of building a new culture of planning linked with quality. This has meant increased accountability, and as expressed in the integral development plan of University B, this quality assurance interest has also meant a competitive response to new demands, growth in size and academic programs, improvement in research, hiring more and better professors and changes in the structure and infrastructure (Universidad B, 2010a). The result is that University B showed a remarkable interest in taking part in the institutional and national accreditation process, which has become a positive externality in building a better quality assurance culture and institutional improvement. As described by the Vice Rector, this determinant has resulted in a more professional university in its human resources and its processes and procedures:

The most important change has to be the professionalization of university management, with a more articulated, reflective, less reactive, more prospective, and more visionary view of the institution...(in order to) to have a more contemporary reading of the knowledge society and a more visionary understanding of the university (University B, Tape Recording No. 2, Vice Rector).

The third determinant was the strategic decision of the university to be more international and globalized. This determinant has emerged explicitly coming from the discourses of the Rector. According to interviews with the majority of different stakeholders this has been partially implemented

It is interesting to highlight that these three determinants (competitiveness, quality assurance and internationalization) appeared strongly in institutional documents, observations and interviews with the top executives of University B as well as with some professors. However, these determinants did not appear as clearly or in the same way when interviewing lower level administrative staff and students. Some people of the lower level administration appeared to be implementing changes without knowing the actual reasons for them, while students were

completely ignorant of the process of change experienced by University B. It seems that in order to go further in this change process, it would be necessary to go back and explain the reason for the changes to the whole community in order to successfully see the expected results.

These determinants also explain why and how the idea of credit frameworks came about. Credit frameworks seem to be an important instrument to internationalize the institution and to build a curricular reform, which is one of the key parts in trying to be more institutionally competitive. In addition, based on the implementation of credit frameworks, University B has facilitated the creation of new programs and has responded to the requirements on this topic included in the national model of quality assurance and accreditation.

The particular micro-context at University B

The best way to describe the current culture and current status of managerial practices at University B is to refer to its institutional motto, “Always new and always traditional”⁴⁹. This motto describes a University that comes from a very important and distinguished tradition. One that is full of history and has a remarkable past, but that in the last 15 years is trying to introduce modernization and future competitiveness for its future. As expressed by one of the deans, University B understood history was not enough and initiated enormous transformations in order to survive in a more complex and difficult environment of higher education:

I think University B, due its historical importance, thought that tradition and fame was enough...today, university B found that it needed to change, and that history was not enough to deal with the changes of higher education in Colombia and the world...to face the new scenario of competition (University B, Tape Recording No. 5, Dean).

Therefore, as summarized in Appendix 21, University B is moving quickly and growing significantly in the number of programs and students. This growth has led to a massive transformation of the structure, a more developed idea of management (including concerns about how to be more efficient, effective, flexible, technology-oriented, professionalized with a focus on assessment and control), and a growing integration between planning and quality assurance. These managerial transformations have invigorated and changed the institution but they have also implied a new understanding of the culture of the university.

First, the University has shifted from an institution where tradition and history were dominant components of cultural capital and cultural value, to an institution that understands tradition must be accompanied by modernization and resilience in order to be effective and powerful. Second, University B has understood it needs to have a more international and open-minded approach, rather than just a local or inward looking perspective, in order to take advantage of the key transformations in the coming years in the Colombian and international higher education sector. Third, University B has implemented structural changes, which result in a less feudalistic institution and one in which faculties, the administration, and academia are more integrated and at least try to work together. Finally, University B, in terms of its model of education, is moving from a more paternalistic top down culture to a more autonomous and flexible model, in which students and professors feel more freedom and independence in their particular role. Many of those interviewed indicated that one of the issues that relate to this cultural transformation is the implementation of credit frameworks.

As expressed by the majority of the stakeholders interviewed, the next step for the future of University B includes changes in governance and the implied managerial transformations and new cultural demands. Other interviewees noted that students’ current concerns about the bureaucratic nature of the university must be addressed, as this would hinder the implementation

⁴⁹ This is a translation from the original motto in Latin which says “Nova et Vetera”

of certain strategic projects such as the credit framework. These two issues remain as the main topics to be dealt with in the near future by university B.

The impact of credit frameworks on the university management

Appendix 22 sets out the main changes in management and the actors that have identified these changes. This table is a summary based on observational data and data from institutional documents. Drawing from the data is possible to say that the main impact of the implementation of credit frameworks at University B could be related to the university's structure, management practices and culture.

There were important changes to the structure of University B, especially related to 1). the reduction in the number of academic departments and faculties in order to obtain more efficiency and economies of scale, 2). the creation of new central offices and central committees in order to centrally administer, control and supervise the impact of credit frameworks (including central committees on physical management, human resource management, financial management, academic timetable management, credit management and curricular management), and 3). the appearance of new offices such as planning and quality management, in order to guarantee the framework operates correctly. The Registrar for example noted that:

A notable change has been the new organisational structure when implementing credit frameworks...we created an office in charge of academic coordination which is the new registrar office...all of this is under the management of the Academic Planning Department...The Provost, the Academic Planning Department, and the Registrar Office saw the need to create committees in which all the adjustments were done. Right now, an Academic Credits Committee is being created. It orients others to the curricula policy and the way to transform programs.... In addition, now each Faculty has internal curriculum committees...there were also changes in the financial and administrative structure of the university because (for example) we now need to budget income from fees according to academic credits taken. (University B, Tape Recording No. 10, Registrar).

The other impacts correspond to important changes in two key aspects and mechanisms in order to develop better university management systems particularly in relation to human resources and information systems. University B has made a great advance in professionalizing human resources in terms of bringing more and better people to administer the credit framework both academically and administratively. It has also developed strong training programs on the framework, its administration, and the services required. Additionally, University B has made an important investment in information systems in order to administer the new academic and administrative issues derived from the implementation of credit frameworks.

Complementary to this process of change have been two additional impacts on the financial and marketing (commercial) management of University B. The improvement in financial management includes a centrally oriented budget organized in cost centres, more integration of academic needs and the financial possibility to fund them, an articulation between the strategic plan and financial planning, and more cost consciousness among the academic and administrative community. The Director of Finance noted that:

The financial information system was the last part implemented (with the introduction of credit frameworks). At that moment, we found the need for a system able to give financial details at the academic and administrative unit level, to manage different cost centres, to compensate costs between units...the most difficult issue has been the human resource cost management which has been very centralised...the credit system yielded

an important challenge in terms of defining a value for each subject not only in academic terms but also in financial terms. It presents the question of how to tariff each credit and associate it with the fees...we decided to tariff using a range of academic credits. (University B, Tape Recording No. 4, Deputy Director of Finance).

Regarding marketing, University B has developed a stronger marketing and communication strategy, thus taking advantage of the increased attractiveness for students due to the implementation of credit frameworks (including double degrees and ease of developing exchange programs). The attractiveness for students is also derived from the consequent growth of the university in new programs due to the flexibility developed by the credit framework.

Finally, the last group of impacts correspond on one hand to new rules and regulations related to the implementation of credit frameworks, and on the other hand, to cultural and managerial changes in academic behaviour and the management of University B. Regarding the latter, according to the interviews to the professors and students, the academic faculty at University B, due to the credit frameworks, are now more concerned about pedagogy, students' autonomy, academic planning at the professors level, interdisciplinary dialogue. Reduced paternalism regarding the students is also reported. This shows the beginning of a new academic culture at the university, including more academic debate (including a culture of negotiation among the different faculties) and openness to the international advances in higher education as well as local changes in order to improve internal academic management.

Micropolitics in the implementation of credit frameworks

Appendix 23 summarises the responses of the key actors to the implementation of credit frameworks. Pragmatism and enthusiasm seemed to be the normal attitudes at University B in relation to the implementation of credit frameworks. However, when dealing with professors and students, there were signs of scepticism about the future of the framework and the process that led to the implementation.

There appeared three main difficulties in the implementation process itself. First, there were diverse understandings of the concept of credit frameworks due to different interests, different languages among faculties, and even different personal (professors and students) attitudes. Attempts to resolve this were made through a profound training process among professors and administrative staff. The second difficulty was the initial professors' reaction and resistance to the framework, an issue that has been diminished (but not eliminated) by strong leadership at the deanship and Vice-Rectorship level. The third difficulty was the students' lack of awareness about the credit framework in terms of its advantages, usefulness and possibilities. This has implied that particular work was needed with the students in defence of the system; however, according to the interviews, this work by the university to help students understand, defend, and promote credit frameworks was not undertaken in a systematic manner and could be needed in the near future.

Today, there appear new difficulties, which are part of the new scenario in the current implementation of credit frameworks and which need to be taken into account for the future success of the credit system. As expressed by the professors and students, they are seeing a more centralized model of academic management (due to the credit frameworks) that is becoming more bureaucratic with excess supervision and longer time periods for decision-making. Interviews showed that students appear to be using the system in order to choose an "easier" academic path for certain classes, thus avoiding the potential for a diverse and excellent learning experience while settling for mediocrity. Finally, according to the professors and students, certain faculties and academic departments, because of the difficulties mentioned above and to serve their own interests, are trying to build their own empires and poach subjects that belong to other academic departments.

The impression that I have (with the implementation of credit frameworks) over the last 10 years is that the faculties have been feuding more and are mostly interested only in accommodating themselves. I felt more flexibility 5 or 6 years ago than today...that flexibility is now more diffuse...today the interdisciplinary work is very difficult and there is change resistance (University B, Tape Recording No. 12, Professors).

The result is a need to transform governance issues, including a stronger role from program directors and central credit committees to avoid this new “academic feudalism” and territorial reactions. In addition, University B needs to improve its training program for the credit frameworks (its usefulness and positive impact) for students. The research also discovered through the interviews that “non-full-time professors” were not included in the training programme to the detriment of the stated aim of the implementation of the credit framework. Finally, University B, as expressed by many stakeholders, needs to be more concerned and prepared for changes and adaptations which need to be executed in relation to the framework (for example, the fee structure must be revised in order to solve difficulties expressed by directives and students).

In conclusion, even though University B is one of the strongest institutions in the implementation of credit frameworks in Colombia, many issues still need to be solved in order to attempt to resolve tensions and conflict. The challenge for University B is figuring out how to successfully resolve these challenges in the near future.

The Case of University C

University C is a public university that was founded 70 years ago (1943) and is located in a region of Colombia with a strong university tradition. It is located outside of the capital city of Bogotá. In terms of higher education institutions, this region still needs more growth and development, a topic that has relevance in the reason for the existence of this university. University C is a comprehensive university and includes undergraduate and postgraduate programs in many areas such as basic sciences, engineering, and health. It covers the whole spectrum of functions in higher education including research, teaching, and social services. Its structure is organized in academic units of professors from one discipline only as well as interdisciplinary special institutes and academic centres in order to generate and distribute disciplinary and interdisciplinary knowledge. Today, University C is one of the institutionally accredited universities in Colombia due to its high quality standards. At the time of writing, the student population was approximately 13,000 students with approximately 70 per cent of those being at the undergraduate level.

University C has traditionally been recognized for its emphasis on social relevance and its interest in regional issues, and also for its tradition of a strong and dynamic academic community. As in other public universities, University C combines experienced senior professors and administrators with new ones in an on-going process of change that usually comes from the top and remains in the implementation stage at the bottom level. During the visit, anxiety, interest, apathy and complaints were all reported in relation to the curricular transformation. Some of the informants interviewed reported that the major change at University C came from the 1950s and 1960s, where the university reinforced its social commitment with its region and local society. Others identified a massive academic reformulation in the 1990s with new demands on internationalization, quality assurance and research. Finally, the rest identified an important change beginning in 2007 derived from a very difficult financial situation along with managerial pressures that required greater development of management

structures and systems. It seems likely that there existed a combination of the three situations described above, in which appear tensions, troubles, discussions as well as significant advances.

As an example of the tensions related to changes starting in 2007, the only stakeholders who did not appear for the interviews (even though they confirmed the invitation the same day of their participation and even expressed their reasons for not attending the interviews) were the students. With some students I informally asked about this within the campus and they revealed me that they were quite concerned about the future of their institution and they wanted to alert the researcher to difficulties in the implementation of the credit framework and in the general curricular reform. They also expressed concerns about other issues which turned out to be similar to those identified in the analysis of the new institutional plan (2009-2018) which was carried out with the whole academic and administrative community of University C.

Relevant moments in the implementation of credit frameworks

Three particular moments stand out as the most relevant in the recent history of the implementation of credit frameworks at University C (Appendix 24). The first corresponds to the long history and tradition of University C. The second corresponds to the 1990s decade, and the third corresponds to the last 10 years starting in 2000.

Traditional professors and former Deans from the Faculty of Medicine (one of the most prestigious in University C) were the ones to describe the first part. They explained that the current situation of University C must be understood in terms of its curriculum and the ideas and developments coming from the 1950s and 1960s. During this time, University C had “big names at the top”, a remarkable concern about social relevance, an interest in more quality and international reputation and an “irreverent academic community” which was avid, able, and institutionally legitimate to implement new policies and relevant changes. These antecedents and the current preponderant role of the faculty in the institution, explain why one of the most powerful faculties in the current implementation of credit frameworks is actually the Faculty of Medicine, which usually is not the case in any other public or private universities⁵⁰. Many expressed that, without these antecedents, it would be impossible for any other faculty to be leading this process.

The second determinant moment corresponds to the 1990s. During this period, and especially in the last years of this decade, University C had discussed and built a curricular policy including the implementation of credit frameworks. The best expression of this period could be the promulgation of an “Institutional Educational Project,” which also included academic strategies and tactics for the period 1996-2010. This educational project adopted the idea of a flexible curriculum, demanded more academic rigor, better integration between theory and practice, and emphasized retention, access and interdisciplinarity. This document was developed by the academic community, who led the curricular discussions during the period of 1997-2001. Those discussions were preceded by a massive reduction in the structure of University C that eliminated the traditional academic departments and faculties and created new academic units (reducing by than 60 per cent the number of previous academic units). This period implied an important transformation for University C, which helped in the transition to a decade of growth in the last years. In terms of the curriculum related to the credit frameworks, this period ended in the implementation of a new Curricular Reform in 2002, which defined particular rules and norms about the academic organization, credit system and curriculum orientation. As expressed by many of the stakeholders, this period marked and built the basic structure for the new process of change including more and better prepared professors and more interest in research.

⁵⁰ In fact, the Faculties of Medicine in the other universities studied, as well as is reflected in the literature, are usually one of the most difficult environments to implement a radical change such as the one proposed when implementing credit systems in Colombia.

During the last 10 years (2000-2010), University C has made important adjustments in terms of the curriculum, seeking more internationalization that has gone hand in hand with an important process of quality assurance. This period has also been accompanied by debates and academic dialogues about the implementation of credit frameworks and its real impact that have led to a new Curricular Reform in 2009. In the middle of this process, the University held elections to select a new Rector. The University was especially concerned about managerial efficiency and financial and reputational sustainability, which could have resulted in the elected Rector coming from the corporate sector, so as expressed by some professors, deans and directors, during the last years University C has evolved its management, information systems, and quality assurance processes.

Based on the consequences from these three important periods of time, it is possible to understand the complexity and depth of the new Development Plan of 2009-2018, which could be relevant for the near future of the credit framework implementation (Universidad C, 2009). The main concerns of this plan are the curriculum, teaching, and learning. One important consideration is also the internationalization of the curriculum, which relates to mobility and the possibility for the curriculum and academic programs to be recognized worldwide, or at least in relation to partner institutions. This plan also recognizes weaknesses in the implementation of the curricular reform and credit frameworks since it was clear that the process of change had not properly permeated the community and culture of professors and students at University C⁵¹. Key stakeholders indicate that in the future a stronger use of credit frameworks when developing new postgraduate programs is required, improving the research function, and the regional social commitment.

Concept and purposes of credit frameworks

Given its characteristics, University C defines itself as essentially having a “public nature” to produce, appropriate, and share knowledge. One of the means to do this is explicitly defined in its mission as the “curricular processes.” Therefore, due to its essence, University C has conceived the curriculum as a key vehicle to fulfil its mission. In addition to this, in its vision, University C includes having “flexible curricular processes” in order to be relevant in the future. Because of this, it is not unusual to find in the successive strategic plans and educational projects (which the institution has had during the last 20 years), references to the introduction and implementation of credit frameworks within strategies about curriculum transformation.

It can thus be said that University C is focused on offering a flexible curriculum, which is contextualized and responsive to society’s needs in order to guarantee an integral education. The idea of curricular flexibility was intended to promote a curriculum related to self-direction, to promote various subjects for different programs, to introduce credit frameworks, and yield curricular development. It has also meant the possibility of being more efficient in using time and physical resources. For University C, flexibility is clearly related to increasing quality and academic rigor, which could help the university to develop new programs, new administrative frameworks, and new possibilities for the students to enter and exit the system.

University C has understood the credit framework as a consequence of its curricular process of transformation as can be seen not only from the interviews but also from the official documents (Appendix 25). Most of those interviewed see the credit frameworks as one of the stronger means to implement the curriculum policy (which comes from the end of the 1990s). Regarding the understanding of the stakeholders, included the professors, the credit framework was associated with internationalization (seen in a more developed way than just a problem of

⁵¹ As expressed in the institutional self-evaluation report of University C from 2006, “We do not use the real credit framework. We are just using a mathematical calculation. Therefore we are just diminishing the possibilities coming from the curriculum flexibility policy”. This has led to the new curriculum policy in 2009 and its main ideas were included in the Plan 2009-2018.

mobility, including topics like program harmonization), quality assurance, and a way to attain managerial efficiency and new opportunities for funding. The curriculum discourse and understanding is deeply rooted in the academic and administrative culture of the institution and this discourse has helped them to deal with the kinds of problems they are facing with the current implementation of the credit framework. In fact, when talking to the Dean of the Faculty of Medicine, he noted that these days they are having very profound discussions about competencies, learning outcomes, and the relationship with the subjects and credits assigned in the program. However, University C is still facing difficulties in implementation. As indicated in the interviews, the framework could go even further than the current situation in which they still only see a more technical debate and not a real academic leadership to promote the academic advantages of the system. While this is also stated in the self-assessment report from the accreditation attained in 2011, the different members of the community actually proved to have a deeper understanding of credit frameworks. For example, the Director of Planning spoke about and demonstrated (during the interview) with certain figures how the credit framework is a powerful tool of education, the learning process, internationalization and has a real academic impact on the students' experience.

I conceive the credit system as a simple and powerful tool, which allows infinite possibilities to develop a process of education, recognition, and homologation among universities... (University C- Tape Recording No. 4 Planning Director)

Given the different discourses and the emphasis that each gives, it can be said that for those who were involved in the 1990s transformation of university C, topics like internationalization, quality assurance and interdisciplinarity were the main purposes for the credit framework implementation. For those more involved during the last 10 years of curricular reform, the credit framework has been an important means to attain this goal, and as a consequence, an important quality assurance factor. Finally, and especially for the new members of the direction of the university (including the new Rector and close collaborators), topics like efficiency and managerial change become relevant purposes of the new credit system implementation.

The current situation regarding the understanding of credit frameworks, especially taken from the institutional documents and from the interviews, shows an understanding of credit frameworks as an important and determinant instrument to develop a new "mode of education" which is also transforming the academic culture of the organization. On the other hand, the same sources also talk about credit frameworks as a way to build more flexible programs, less oriented to inaccessible and difficult content, less encyclopaedic and more rational in relation to learning. However, the actual implementation is still weak in this area and far from expected results.

Main determinants in the implementation of credit frameworks at University C

An initial approach to the main determinants in the implementation of credit frameworks in University C was to refer to what has been written in the Development Plan 2009-2018 of the university. According to this document, there are at least eight determinants in the process of change experienced by University C, and the main concerns for the near future are also identified. Those determinants include topics like 1) the growth in coverage and access rates of the university, 2) the interest in research and postgraduate programs, 3) the new requirements coming from the complexity of university management, 4) the desire for a better reputation and prestige, 5) the demands from the quality assurance trend, 6) the internationalization⁵² and globalization in higher education and 7) the need for more relevance in the daily work of the

⁵² In fact when dealing with the internationalization the Plan says that the "globalization and the growing internationalization make necessary the implementation of comparable systems of assessment and standardization of the curriculum by the use of credit frameworks and a growing mobility of students".

university. All of these determinants explicitly refer to one of the main transformations of the university, which happens to be the curriculum reform.

However, this approach overestimates the determinants, because as it was seen in the institution, those determinants did not have the same importance in the transformation of University C. Furthermore, much still remains to be done regarding their impact on the real implementation of the curriculum policy and the credit frameworks. The main determinants of the implementation of credit frameworks, according to the actors interviewed (included in Appendix 26) and based on the information collected in the study, could be organized into three periods of time which were important for University C. One period of time starts in the 1990s but is more than 5 years ago. This period is described by the older part of the academic community (especially professors and deans) and emphasizes two determinants for the implementation of credit frameworks: the curricular reform⁵³ and the quality assurance demand from the international and national context. Both issues required from University C more flexibility (academic and administrative) as a determinant of quality and curricular transformation and they both included credit frameworks as a key step in this process.

There is an important determinant of change. This was the first public university involved in quality accreditation in Colombia... this issue has pushed the modernization of academic programs and the institutional change (University C, Tape Recording No. 9, Professors)

The second period of time refers to the last five years, which corresponds to the period of the new Rector. The people closely related to this period of time, the majority of whom were appointed by the new Rector, identified a key determinant in the new managerial vision and attitude that the new Rector brought to the University. Since 2007, University C has been in a process of improving administrative efficiency by developing new income sources, minimizing costs, and obtaining economies of scale. The new Rector is “taking risks and confronting interests.” This emphasis has yielded to the curriculum reform and has brought additional interest in the implementation of credit frameworks, because in the Rector’s words, they could help in this process of managerial improvement.

The final period of time could be defined as the near future and even some part of the present of University C. The determinants in this case are usually expressed by those in charge of the future of the university (Planning Director, Dean, Rector). The reported determinants that are the necessary ones for the present and near future are the research and postgraduate orientation of the university and the internationalization process.

Since some years ago we are fundamentally a postgraduate university. We have more postgraduate programs than undergraduate programs...we have evolved strongly because we understand postgraduate development as a way to cross the knowledge frontier (University C, Tape Recording No. 3, Dean).

Both of these determinants correspond to topics the university itself identified as weak or in process, and both are related to the implementation of credit frameworks. As expressed by deans and professors, one of the main transformations that had been happening during the last years at University C is the interest in growing postgraduate programs, followed by the improvement in research. This transformation requires a particular emphasis on curriculum flexibility and curriculum integration between undergraduate and postgraduate programs, for which credit frameworks become a relevant policy. The other future determinant is going to be the internationalization process, which, as expressed by the Rector, is still an on-going process with

⁵³ One of the professors interviewed by University C in the Self-Assessment Report even says, “The most important thing that has happened to the University is the curricular reform.”

many transformations and adjustments to be done. The Rector also stated the need to further develop the credit frameworks as a way to increase mobility, exchange programs, and the homogenization of curricula with international universities.

The particular micro-context at University C

In analysing the documents, this study found a shocking remark in the analysis conducted by University C when developing the Strategic Plan for the period 2009-2018. In a particular section about the culture of the university, the document describes a difficult situation of verbal and physical aggression among the community, loose academic debates, signs of untruthfulness, and expressions of intolerance and recurrent conflicts. In addition, it says that University C is facing a problem of an excess of institutionalization that has created, according to the self-evaluation report in the accreditation process, a problem of governance due to an excess of rules. Said in this way in an institutional document, and based on the interviews with professors and deans, what is clear is that University C is in the middle of a difficult, tense and conflictual process of change which is affecting the culture and the organizational climate of the institution.

University C is also experiencing an internal debate about its past and present which may have led to such confrontation. As shown in Appendix 27, which shows the difference between the past and present culture and managerial structures, University C comes from a culture of reaction against change, an academic community with great autonomy, and poorly oriented to the “client” or to service. In the middle of this cultural status, since 2007 new people at the leadership level (including the current Rector) are trying to transform the institution into an organization open to change and to develop a more service-oriented institution. However, open discussion is feared. The current Rector stated: “I feel fear to open that discussion [about the cultural values of the university] because it is something we will never finish.”

This particular confrontation of two cultures is exacerbated by radical transformations in the managerial model of University C. The kind of managerial changes experienced by University C and the resulting impact for the academic community has strengthened the internal conflict. In the current situation of University C, academics and administrators are forced to work more closely in many more instances and situations, including for example in the curricular reform and the implementation of credit frameworks. This situation is creating complexity and may be fuelling the cultural conflict that seems to be happening at the university.

In addition, the managerial changes have had large impacts on the day-to-day life of the University. These include a process of downsizing which reduced the academic departments and faculties in significant numbers, stronger processes of centralization and institutionalization, a stronger planning culture demanding more administrative tasks and a growing number of external advisors coming to the university to implement this process of change. These issues have created issues that affect the implementation of changes such as the credit framework since these are seen as a threat to the academic community and their interests.

Although this cultural and managerial confrontation exists, it is also true that an important group of stakeholders (including Professors, Top leader positions and the Deans) identify this current transformation as positive for the future of the university. They perceive current transformations including the credit frameworks as leading to internationalisation, developing research and postgraduate programs, and giving the university the ability to go deeper in the implementation of the curricular reform. In fact, this last reform, which has included the credit frameworks, is identified as a key tool to help in the process of change in the culture of the University.

Finally, a debate that is still in place about the implementation of credit frameworks and its relation with the particular micro context of the university has to do with whether the implementation of credit frameworks is leading to a more centralized or more decentralized university. For the majority of the people interviewed, the purpose of this change is to

institutionalize and centralize processes in the university in order to control and standardise them. For the others (especially those designing the implementation but excluding the Rector), the credit framework implementation leads to a more decentralized University with stronger and more effective Faculties in the decision making process.

The impact of credit frameworks on the university management

The research found at least three main impacts of the implementation of credit frameworks on the university management that were shared by the majority of the community at University C (described in Appendix 28). The first impact corresponds to an important change in the structure of the university that includes downsizing and better and more integration between academia and the administration. This has included a reduction and better operation of the academic structure to deal with more interdisciplinarity, the development of central committees to administer and organize the curriculum, and new administrative spaces in which academics deal with the administration in a more deliberative. As expressed by many of the individuals interviewed, University C has experienced a massive reduction of faculties and departments, an issue that is also generating difficulties. Deans view this process as still being non-optimal and they believe University C is currently facing a pyramidal structure as opposed to a matrix-structure in which more efficiency could be attained.

The second important impact comes from the centralization and institutionalization of certain roles and policies. According to the current Rector, there is an on-going process of the centralization of issues such as the budget and investment management in order to attain more effectiveness.

We have re-centralised many things at the university (according to the introduction of curriculum flexibility)...I have centralised the university in the sense that faculties do not decide everything independently (University C, Tape Recording No. 1, Rector).

This has caused changes in the governance of University C and is also related to central curricular and academic policies that are trying to organize the academic process of transformation.

The third impact, and a remarkable transformation due to the implementation of credit frameworks is the implementation of an Integral System of Management, which has also dealt with the institutionalization of processes, procedures, internal policy documents and particular policies. This process is linked to the idea of showing more transparency and making possible a more precise and coherent process of institutional assessment. Quite remarkable is the information provided in the institutional web page through this system, and how anyone can publicly view the results and ways in which this university is managed. The integral system includes topics such as risk management, documentary management, financial and budget management, and quality management. As indicated by the dean and confirmed by some of the professors, the implementation of credit frameworks has been an important trigger of a robust managerial system at University C.

[Credit framework implementation] has been a trigger of a new need to build and document processes and procedures and this is the reason for the introduction of the integral management system of information. (University C, Tape Recording No. 5, Dean)

In addition to these important processes of change, with the implementation of credit frameworks, University C has also taken a step forward in redefining norms, policies and regulations regarding the curriculum and its management. In fact, the majority of the professors stated that the new curricular policy has helped to avoid improvisation in academic management.

Due to the above-mentioned changes, University C has moved faster and has advanced policies and strategies related to the creation of new academic programs. The implementation of credit frameworks has allowed University C to move forward in its strategic idea of building a growing number of postgraduate programs.

Credit systems facilitate the creation of new academic programs... for example I created a new master's degree in just three months alone...building it was very simple
(University C, Tape Recording No. 9, Professor).

Another unexpected result was the possibility to be more efficient in academic administration, including results about increased economies of scale, lower costs, increased efficiency in the infrastructure management, and better administration of expenses. Finally, according to the interviews with top management positions and the Dean, the implementation of credit frameworks has helped the institution to build a stronger culture of service.

Micropolitics in the implementation of credit frameworks

As can be seen in Appendix 29, various stakeholders (except professors who as said before express some difficulties) at University C share a general pragmatism and some enthusiasm about the implementation of credit frameworks. In the case of the professors some scepticism can also be noted. In general antagonism does not seem to be present except in the case of the students and professors. The strongest difference of opinion in the community of University C is regarding whether or not there will remain the traditional open culture of academic dialogue and academic participation. The interviews indicate that although the current Rector thinks that the culture of academic participation and dialogue has increased, on the contrary, deans and professors think that this is not the case. This debate is reinforced due to a growing concern about more centralization versus more decentralization in the current situation of University C. On one hand, some of the directorship accepts the desire to build more centralized policies (including curricular policies), but on the other hand, professors express worries about this policy that, in their opinion, will negatively impact on the academic management of University C. All of these issues have added to difficulties in the labour climate of the university (due in part to low salaries). In any case, the implementation process of credit frameworks is still working properly; largely due to the remarkable role played by the Faculty of Medicine that represents an important actor in University C.

Three long-term difficulties have been identified for University C. The first difficulty is a growing concern (especially from professors) about the information system, institutional documents, and Deans that may not be adequate to fully implement and manage a flexible curriculum (since they are not all well prepared for it). In addition, this system also has difficulties integrating the planning, financial and administrative processes of the university. Some professors themselves have noted how professors are a barrier to the successful implementation of credit frameworks. They stated that professors could be key elements for the successful implementation of credit frameworks, and they feel that the academic community in general should be more open to the advantages and possibilities from the credit system. They indicated that some professors defended the past of rigid curricula and became resistant actors in the process of change.

Talking about how deep the process of implementing credit frameworks is...For me it is not an institutional problem... is a professor's problem...we do not adequately use the concept of credit frameworks (University C, Tape Recording No. 9, Professors).

As expressed by the Vice Rector, what is behind this situation is a traditional reaction against the process of change. The Vice Rector stated:

Every administrative or academic restructuring implies discomfort in the community; one thing that persists a lot in academia is the status quo. The academics resist change, to break paradigms, to be conscious that the world is changing too fast outside. Academia is slow to change and this has been complicated here.

Finally, University C also expressed concerns about certain unexpected impacts from the introduction of credit frameworks that included growing costs in certain areas and processes. That has been the case with the need to hire new professors unexpectedly in some faculties and also difficulties in taking advantage of a flexible curriculum in terms of more income. The concern has caused some alarm about the process of implementation and these difficult situations have needed to be checked.

Chapter 6: Cross Case Analysis

Looking at the results of the three individual case analyses together with the literature review, it was possible to identify three hypotheses related to the main research questions. This chapter discusses these hypotheses and validates the conceptual framing used in the research.

Regarding the hypotheses, this cross case analysis firstly discusses the extent of implementation of credit frameworks and its relationship to the concept and purposes, secondly it deals with the main common drivers in the implementation of credit frameworks, and thirdly, its impact in terms of governance, culture, managerial practices and adaptability. In this way, this chapter responds to the three main research questions presented in earlier parts of the thesis.

Next, this chapter offers a reflection on the culture, microanalysis, and micro politics in the implementation of credit frameworks and the proposed conceptual framing.

The Relationship between Credit Frameworks and Management

Although the concept of credit frameworks (as developed in Chapter 2 and described in Appendix 6) appears in the majority of policies and institutional documents of the three institutions described, it is clear that its actual implementation differs from the original conceptions. Regarding the conceptualisation and purposes of the credit frameworks, the research found two main disjunctures. One disjuncture was between the official purposes (similar to the idea of credit frameworks described in this research including transfer, mobility, accumulation and quality⁵⁴) and the purposes actually attained. The second disjuncture was between the expectations of the implementation of credit frameworks and the reality after the initial implementation. In both cases, discourses, official intentions, and expectations far exceeded what was really happening at the institutional level. My study indicated that universities appear to have “bought” the idea of credit frameworks based on the external discourse, but they still struggle to implement all the parts of credit frameworks and therefore do not see the intended results promised by the external discourse.

In the research results, those disjunctures usually depended on certain issues. Universities with stronger leadership at senior levels such as Deans and Academic Vice Rectors who were committed to deep curricular reforms usually achieved a better implementation of credit frameworks. In addition, a particularly successful strategy seemed to be the use of ‘role model’ faculties or academic departments which became reference points or examples of better practices when introducing credit frameworks, especially if they were seen as dominant and influential sectors of the university.

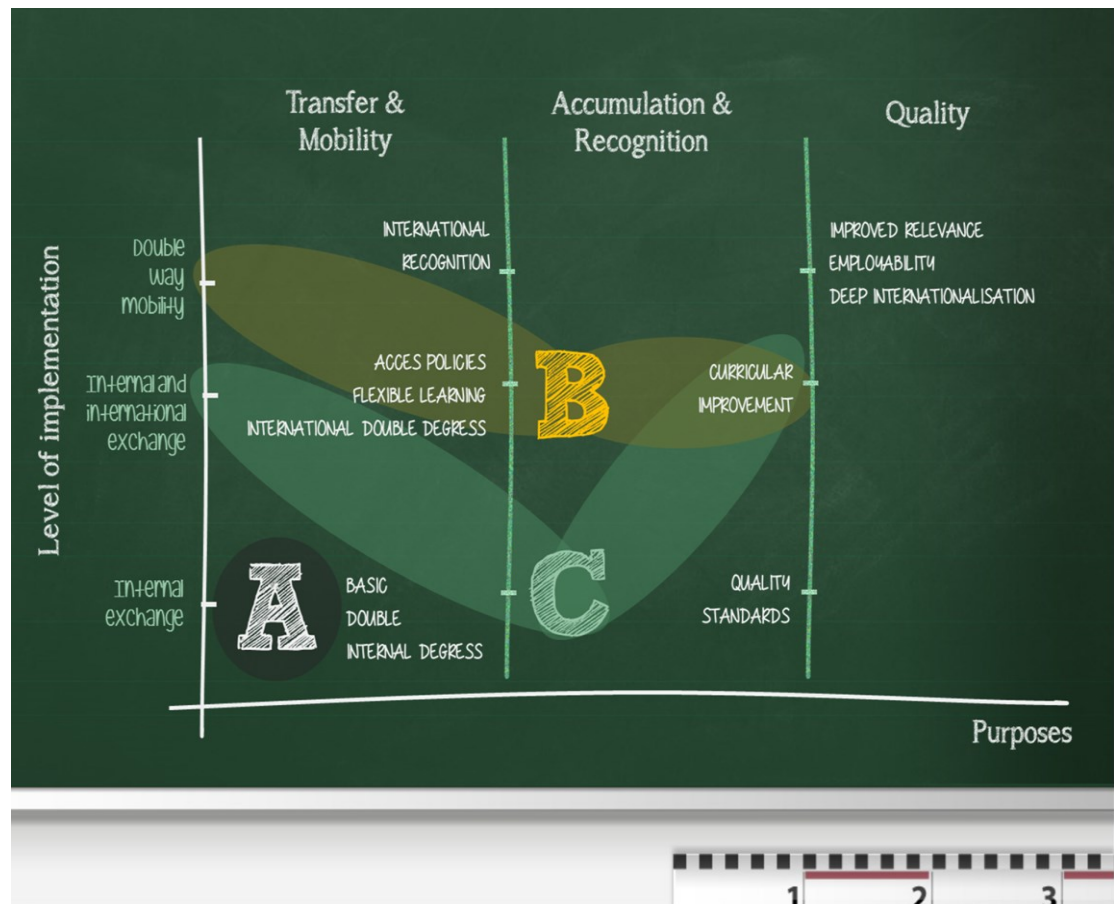
In addition, my study indicated that the level of social appropriation of the frameworks (especially by professors and deans), together with the existence of a culture of deliberative democracy could also be triggers for the deeper implementation of the academic credits framework. This also happened in more comprehensive (complex) universities (according to the kind of institution and its academic programs offered). This means that the academic frameworks require not only social appropriation, but also a solid academic community and a culture of deliberative democracy able to improve the system and help in the intelligent implementation of it.

Another important aspect of studying the implementation of credit frameworks was to analyse how institutions understood the purposes of credit frameworks and how this related to the level of implementation. As discussed in chapter 2, there were at least three main objectives which actually corresponded to what was found in the cases studied: 1) transfer/mobility, 2)

⁵⁴ Quality is included in different issues such as relevance, academic development, learning and content improvement, pedagogy and didactic improvement, and more internationalisation, among others.

accumulation/recognition, and 3) quality. The only difference that appeared in the three cases studied was that those purposes did not appear successively (one after the other). On the contrary, (as shown in Figure 1 below), universities usually evolved from a basic interest in transfer and mobility (initially just internal) to advances in either one or both of the other purposes (accumulation/recognition and quality). The diagram in Figure 1 shows the evolution in those purposes in each of the universities studied (which are represented using different shadows).

Figure 1: Credit Framework Purposes and the Level of Implementation- Universities A, B, and C ⁵⁵



In all the cases studied, it appeared that the one purpose, which appeared to be the original or initial purpose of the implementation of credit frameworks, was the satisfaction of quality requirements from the government for accreditation purposes. It seems to be that academic credits helped universities respond to governmental quality standard requirements.

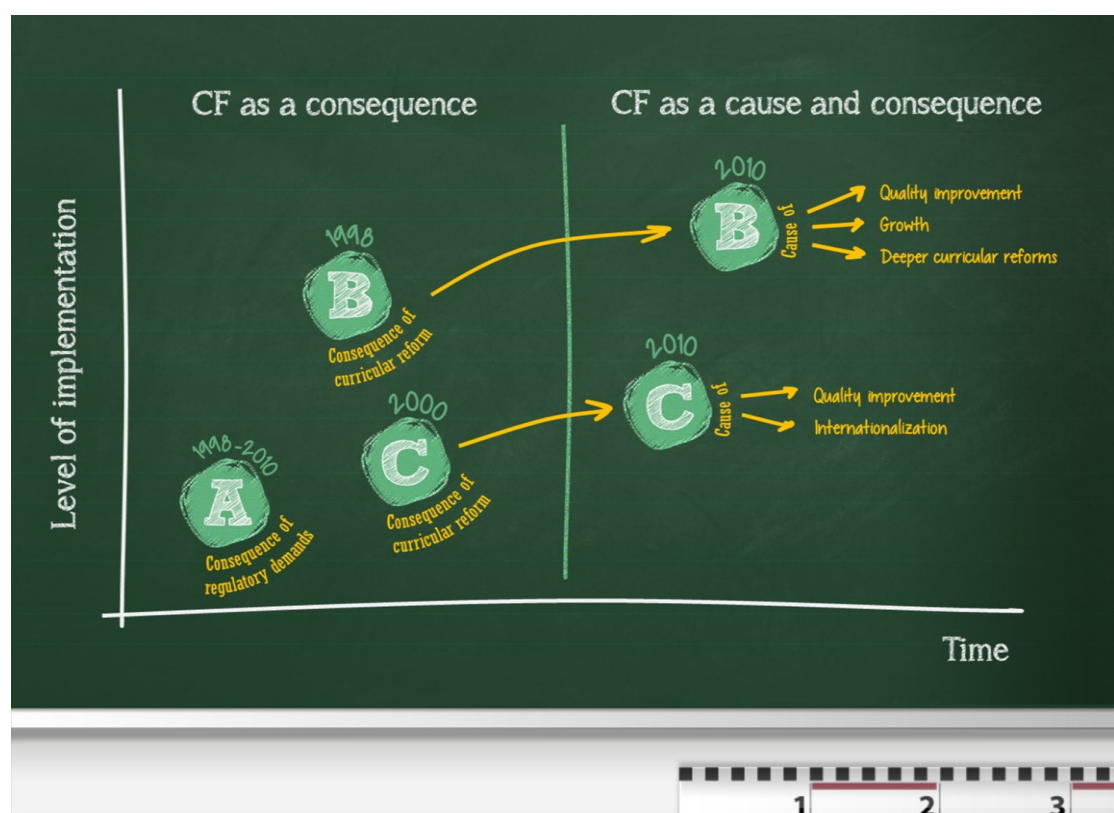
Academic credits have been accepted by members of the academic community as a pre-condition in obtaining accreditation and quality recognition (University A, Tape Recording No. 4, Planning Manager and Quality Assurance Manager).

⁵⁵ Source: The author, based on Documents analysed, observational data, interviews and the research itself

The next most important purposes included mobility, flexibility, quality, and double degree capability. Universities that have gone further in the implementation of credit frameworks have evolved in the quality and importance of purposes they assign to credit frameworks and usually this has also helped them to attain more and better results.

The type and extent of implementation also evolved over time as shown in Figure 2. This diagram indicates that Universities, over time, can evolve from using credit frameworks as only a consequence of a particular trend or to fulfil a requirement; to implementing a deeper and more useful understanding of it in which the credit framework is also a trigger for further institutional developments. As an example, University A (the least developed in the implementation of credit frameworks) perceived the credit system as a consequence of legal requirements (regulatory reason), while University B, which showed stronger implementation, also perceived the framework as a cause to improve quality, attain academic growth, and improve future curricular reforms. This diagram also shows how the three universities moved from viewing the credit framework as an end consequence to viewing it as a potential trigger for future improvements, depending on the depth of implementation, which in turn depended on academic leadership, academic culture, and social appropriation.

Figure 2: Dynamics in the Process of Implementing Credit Frameworks - Universities A, B, and C⁵⁶



⁵⁶ Source: The author, based on Documents analysed, observational data, interviews and the research itself

As an example of this, Universities A and C (both with a lesser degree of implementation of credit frameworks and curriculum changes) understood credit frameworks, either as a tool or a regulatory obligation:

I conceive the credit system as a simple and powerful tool, which allows infinite possibilities to develop a process of education, recognition, and homogenisation among universities... (University C, Tape Recording No. 4, Planning Director).

However, a more developed institution in relation to curriculum transformation (which is the case of University B) has evolved a more complex understanding of the uses of the credit framework. In this new stage, social relevance, curriculum processes of transformation, and quality, become the way to understand credit frameworks. In other words, credit frameworks are implemented in order to become a better university that is more connected with its environment. The planning director in University B for example indicated that:

The system of credits has transformed academic structures...it is one of the big changes in the mission orientation of the university...the transformation has helped to change the university from a teaching oriented university to a research and teaching oriented university (University B, Tape Recording No. 7, Planning Director).

Main drivers in the implementation of credit frameworks

Regarding the main drivers in the implementation process of credit frameworks described in chapter 2, the Colombian universities have responded with special interest to at least three of these determinants. In particular, one of them, the quality assurance interest, became quite relevant in the implementation of credit frameworks in Colombia, since it can explain the majority of the other important drivers.

As shown in Table 1 (below), all three Universities identified the quality assurance determinant as the most important driver in the implementation of credit frameworks, although each in a different form. University A still sees that in terms of quality, they are just responding to regulatory demands:

Concerning the motivation (about the implementation of credit frameworks), it has been just legal...the legal motivation has been very strong, especially about qualified registry of programs and accreditation (University A, Tape Recording No. 8, Professors).

Table 1: Analysis of the Main Determinants in the Implementation of Credit Frameworks, Universities A, B, and C⁵⁷

MAIN DETERMINANTS	UNIVERSITY A	UNIVERSITY B	UNIVERSITY C
National and International Pressures	Internal Mobility	Competitiveness (National and International) as a long term survival	To be more international and locally more relevant.

⁵⁷ Source: The author, based on Documents analysed, observational data, interviews and the research itself

		strategy	
Administrative and Financial distress	Financial difficulties	Financial difficulties	Managerial (efficiency) difficulties
Quality Assurance	Response to regulations on quality assurance	<ul style="list-style-type: none"> - National Accreditation - Improvements on Research - Curricular Reform 	<ul style="list-style-type: none"> - National Accreditation - Improvements on research - Curricular Reform

University B and University C on the other hand saw the quality assurance driver as more than a regulatory commandment. They also saw it as a way to further their own institutional strategic plan and mission. Although new regulations have influenced their change process, it seemed that, for both universities, quality was more than a government issue or a response to government pressure. In fact, in terms of quality, they have implemented the credit framework as a way to properly develop curricular reforms, to improve their program research orientation, and to attain the national goal of program and institutional accreditation.

The university did an important change building a credit framework, even doing it before the norms and laws demanded. If we wanted to have a quality project of education, we needed to have the best curricula, but to have that, we also needed the best professors, and in order to do so, we needed a new professors' institutional policy (University B, Tape Recording No. 1, Rector).

The other relevant driver in the process of change towards the implementation of credit frameworks, faced by Universities A, B, and C in the last 7 to 10 years, has been stronger national and international pressure. This includes a growing interest in internationalization and competitiveness, but with different understanding of this, depending on the institution. For university A, the pressure was only about mobility, while universities involved in more developed curricular reform, like Universities B and C, were more interested in becoming more relevant and competing in a more difficult market. As expected, the public university (University C) was more concerned with social and academic relevance, while the private university (University B) was more concerned with competitiveness as a long-term survival strategy to be more relevant in the market place.

We also initiated a project of curriculum reform...to build a curriculum process which changed the university. The university now talks about the curriculum and there is growing interest, and the culture is such that it wants to involve different people from the academic community in discussions on curriculum issues (University B, Tape Recording No. 9, Quality Assurance Manager)

A final common driver corresponds to either administrative or financial distress, associated with opportunities to introduce better strategies such as the implementation of credit frameworks that could actually help to resolve this distress.

Additional cross case analysis on this issue was extracted from Table 2 (below). It indicates the main determinants according to relevant actors in the universities. In more developed and academically complex universities, quality assurance as the main driver in the implementation of credit frameworks became relevant not only for senior staff but for the whole community (including professors). However, in University A, only senior leaders identified quality

assurance as the main determinant. Similarly, less complex universities saw the quality assurance determinant more as an obligation rather than a commitment when discussing the credit frameworks. This means that for less complex universities, the implementation of credit frameworks in relation to quality assurance was more a response to legal requirements rather than a commitment to be better “*per se*.” The more developed university in relation to the implementation of credit frameworks went further and saw it as a way to be more competitive and to become much more relevant in a national and international context.

Table 2: Analysis of the Main Determinants in the Implementation of Credit Frameworks, Universities A, B, and C, According to the Relevant Actors⁵⁸

RELEVANT ACTORS	UNIVERSITY A	UNIVERSITY B	UNIVERSITY C
TOP POSITIONS (Rector, Vice Rectors and Deans)	Quality Assurance (Response to regulations)	- Quality Assurance - Competitiveness (Internationalisation)	Quality Assurance (Curricular Reform)
MANAGERIAL POSITIONS (Representative leaders on Planning, Marketing, Admissions, Registry, Quality, Finances, etc.)	- Managerial Efficiency - Mobility	- Quality Assurance - Competitiveness (Internationalisation)	Quality Assurance (Curricular Reform)
PROFESSORS	- Mobility - Quality Assurance (Response to regulations)	- Quality Assurance (Curricular Reform) - Competitiveness (Internationalisation)	Quality Assurance (Curricular Reform)
STUDENTS	NOT CLEAR	NOT CLEAR	

Finally, the only group for whom the determinants become less apparent and even obscure are the students. They are actors that do not easily see the reason why credit frameworks became relevant, and something should be done to make them part of this particular academic change in order for the implementation to succeed. This case of the students is different from the professors’ cases since the professors actually saw credit frameworks as a way to successfully implement curricular reforms.

⁵⁸ Source: The author, based on Documents analysed, observational data, interviews and the research itself

The culture and micro politics in the implementation of credit frameworks

It is important to understand how the particular features and institutional culture affect, or are affected by, the implementation of credit frameworks. This type of analysis recognises the importance of ideologies, beliefs, values and principles in this process of change and assumes that these issues cannot be taken for granted.

Based on the research done, it was clear that implementing credit frameworks was more than a “box of tricks”. In fact, as shown in the two following tables (Table 3, Table 4) during the change process of the implementation of credit frameworks, many things changed in the culture (including ethos, history, and ways of doing things) and the managerial ideology of the universities studied.

Table 3: Transformations in the Culture, which motivated (animated) or catalysed the Implementation of Credit Frameworks⁵⁹

CULTURE FROM THE PAST	CULTURE AT THE PRESENT MOMENT
Traditional/Local	Competitive/Open
Presidential/Feudalistic/Lack of teamwork	Active use of teamwork (among academia and the administration) and a combination between Top-down and bottom-up culture of management.
Paternalistic	More interest on autonomy
Poor “client or user service”	Stronger “client or user service” culture
More deliberant culture (openness to dialogues among the community)	Less openness to “unfruitful” dialogues and use of a more effective deliberant culture
Antagonism towards change	Interest about change (although with natural tensions about it)

⁵⁹ Source: The author, based on Documents analysed, observational data, interviews and the research itself

Table 4: Transformations in the Managerial Beliefs, which have Motivated (animated) or Catalysed the Implementation of Credit Frameworks According to the Level of Implementation⁶⁰

LEVEL OF IMPLEMENTATION OF CREDIT FRAMEWORKS	MANAGERIAL MODE FROM THE PAST	MAGANERIGAL MODE AT THE PRESENT MOMENT
Low or weak level of implementation	Less professional management	A more professionalized university management
	No interest on accountability	Strong interest on accountability and quality assurance
	Fragile institutionalisation	Importance given and advances on institutionalisation of policies and processes- This includes more centralization in certain policies
Stronger level of implementation	Less interest in the culture of planning	Clear emphasis on planning
	Bigger structures	Smaller structures after processes of downsizing
	Weak decision making processes	More agile and efficient decision making processes

Regarding the particular culture and institutional ethos of the three cases studied, some transformations can be seen as the ones that have animated the implementation of credit frameworks. As shown in Table 3, universities in Colombia are moving from a traditional, feudalistic, and paternalistic culture to a more open, competitive, and modern culture in which there exists more autonomy and teamwork among academia and the administration. In fact, when looking at the cases, this process of change was being motivated by the introduction of policies like the credit framework. The other important cultural changes are related to the use of more efficient dialogues among academia and the administration (rather than unfruitful or distrustful dialogues) in which the effective decision-making process is more relevant and in which there is a strong service culture. The other issue that arose from this research was that these new cultural characteristics were more evident in the universities that were more advanced in the implementation of the credit framework (Universities B and C). Similarly, transformations have also occurred in the managerial model (Table 4). The result of this process of change has resulted in universities focusing more on accountability, planning, institutionalization of processes and policies, administrative professionalization, downsized structures (more structural efficiency), and more agility and efficiency in decision-making processes.

Considering institutional culture or ethos, there were at least four main issues, which appeared in interviews with all the universities. Two issues can be seen to be key determinants of the successful implementation of credit frameworks: 1) the ability to build compact working teams and 2) the presence of strong leadership. Successful implementation was also achieved by the university's ability to build compact working teams that involved building links among administrative personnel, directors, and professors. On the other hand, the role of directive leadership was a fundamental driver in the successful implementation of credit frameworks. Both issues have helped the universities to successfully introduce credit frameworks.

⁶⁰ Source: The author, based on Documents analysed, observational data, interviews and the research itself

Universities experienced difficulties when there were problems building a coherent community during the implementation of credit frameworks:

Every day the university is different. There is always something new to work on, and all this happens due to a Rector with a great management ability and leadership in the process of change (University C, Tape Recording No. 8, Human Resource Manager).

Regarding the micro politics in the implementation of credit frameworks, this research found, as shown in Table 5 (below), that the attitude of different actors depended both on the level of implementation of credit frameworks as well as the actor's proximity to the top leadership. The closer to the senior leadership or the more developed the process of change; the more enthusiasm was reported towards the implementation of credit frameworks. Special attention to this matter is required in the case of professors and students where more scepticism is found in order to ensure better implementation results.

Table 5: Actor's Reactions towards the Implementation of Credit Frameworks According to the Development in the Process of Change and the Kind of Actors⁶¹

KIND OF ACTORS	LESS DEVELOPED PROCESS OF IMPLEMENTATION OF CREDIT FRAMEWORKS (University A)	MORE DEVELOPED PROCESS OF IMPLEMENTATION OF CREDIT FRAMEWORKS (Universities B and C)
TOP POSITIONS (Rector, Vice Rectors and Deans)	Enthusiasm	Enthusiasm and Pragmatism
MANAGERIAL POSITIONS (Representative leaders on Planning, Marketing, Admissions, Registry, Quality, Finances, etc.)	Scepticism	Enthusiasm and Pragmatism
PROFESSORS AND STUDENTS	Scepticism	Scepticism and Pragmatism

In addition, when talking about critical actors in all of the universities studied, one or more of the actors came from a particular faculty or department that played a special role in the implementation of credit frameworks. In other words, certain departments played a "paradigm change role" (a role others want to imitate) in the universities when introducing major changes to flexibility and academic credits:

In terms of adaptability (with the implementation of credit frameworks) we have enough adaptability, but it depends on the discipline. The Engineering department is the paradise for the institution because of the engineers' vision. It is different in the law department, which is more difficult to convince and commit to this process of change (University A, Tape Recording No. 2, Academic Provost).

⁶¹ Source: The author, based on Documents analysed, observational data, interviews and the research itself

About the traditional disciplines open to this change (introduction of credit frameworks), I have seen that disciplines, whose purpose of study is related to human learning, usually show proclivity to that change. However, disciplines closer to professional activity (such as Medicine) tend to be less in favour of that change (University B, Tape Recording No. 12, Professors).

An additional issue which seemed to be very helpful in the institutional process of change with the implementation of credit frameworks, and which could be found in two of the universities as a successful trigger, was the possibility of hiring people from outside the institution (either as consultants or in some case as executives) who became pivotal during and after the implementation of credit frameworks:

One of the key issues (in the implementation of credit frameworks) is that it has been impossible to implement that change just with the people from inside. We have had to bring people from outside to make things happen, having a cultural change...the credit framework has allowed a dialogue among different academic entities within the university. We have had more internal mobility... (University A, Tape Recording No. 1, Rector).

Finally, according to the actors' reactions regarding the implementation of credit frameworks, it was possible to identify attitudes in favour of, or against, the implementation of credit frameworks. Both types of attitudes were rather critical. There were at least three reasons for these kinds of reactions: 1) differences in the level of understanding among professors or students about credit frameworks and the potential impact 2) differences in the understanding among all the actors about the main uses and purposes of credit frameworks, and 3) difficulties in the implementation of credit frameworks which alerted the actors to potential unexpected consequences. According to all three cases studied, successful universities developed strategies to solve these problems. Their solutions included training professors, administrative staff, and students on the purpose of building leadership strategies for those involved in the implementation of the process, hiring experts from outside the university to be a voice of authority and assist the change effort, and improving the details such as regulations, procedures and information analysis in the implementation processes.

Main impacts of the implementation of credit frameworks on governance, culture, managerial practices and adaptability

Looking at the main managerial impacts due to the implementation of credit frameworks and using a common understanding of university management developed at the end of chapter 3 as a conceptual framing⁶², this study found certain common transformations, which were summarized in Tables 6 to 8 (below). These transformations, as expected, depended on the level of implementation of credit frameworks in each of the universities studied.

⁶² Based on this, the research understands that the university management could be organized in terms of: 1. Governance and Structure; 2. Culture, Values and Institutional Identity; 3. Managerial practices and techniques; and 4. Adaptability and resilience.

Table 6: Main Impacts on “Governance and Structure” in the Colombian Universities due to the Implementation of Credit Frameworks⁶³

MAIN IMPACTS	UNIVERSITY A	UNIVERSITY B	UNIVERSITY C
MORE INSTITUTIONALISATION (Including central policies, more supervision and control and central offices)	X	X	X
MORE INTEGRATION BETWEEN ACADEMIA AND ADMINISTRATION (Including a growing interest in teamwork.)	X	X	X
CHANGES IN THE CONSTRUCTION AND USE OF THE INFRAESTRUCTURE	X	X	X
CHANGES IN THE STRUCTURE (Including downsizing and new departments or roles in the university management)		X	X

⁶³ Source: The author, based on Documents analysed, observational data, interviews and the research itself

Table 7: Main Impacts on “Culture, Values, and Institutional Identity” in the Colombian Universities due to the Implementation of Credit Frameworks⁶⁴

MAIN IMPACTS	UNIVERSITY A	UNIVERSITY B	UNIVERSITY C
NEW CULTURE OF EFFICIENCY AND SERVICE A (In the university management)	X	X	X
ACADEMIA AND AMINISTRATION WORKING TOGETHER CLOSELY	X	X	X
DEFINITION OF NEW NORMS, REGULATION AND INSTITUTIONAL POLICIES (The last ones specially related to the curriculum issues)		X	X
GROWING INTEREST ON INSTITUTIONAL PLANNING (linking the academia with the administrative needs)		X	X
MORE INTERDISCIPLINARY DIALOGUE (A more developed culture of dialogue among faculties and academic departments)		X	
LESS PATERNALISTIC CULTURE (With students and professors)		X	
A MORE DEVELOPED CULTURE OF NEGOTIATION (Among faculties, departments and the institution itself)		X	

⁶⁴ Source: The author, based on Documents analysed, observational data, interviews and the research itself

Table 8: Main Impacts on “Managerial Practices and Techniques” in the Colombian Universities due to the Implementation of Credit Frameworks⁶⁵

MAIN IMPACTS	UNIVERSITY A	UNIVERSITY B	UNIVERSITY C
MORE PROFESSIONAL INFRASTRUCTURE MANAGEMENT	X	X	X
DEVELOPMENT AND IMPLEMENTATION OF NEW INFORMATION SYSTEMS (Including Registry, Academic, Administrative and Financial systems to manage the credit framework and its consequences)	X	X	X
NEW ACADEMIC PRACTICES			
A. TUTORING SYSTEM FOR THE STUDENTS	X	X	
B. NEW POLICIES ON ACADEMIC HIRING AND CONTRACTING	X	X	X
C. NEW TRAINING PROGRAMS (About the implementation of credit frameworks)	X	X	X
MORE PROFESSIONALIZATION OF HUMAN RESOURCE MANAGEMENT		X	X
REMARKABLE IMPROVEMENTS ON FINANCIAL MANAGEMENT (Including developments on budgeting, financial planning, introduction of cost centres, cross-subsidies and similar policies)		X	X
IMPROVEMENTS AND PROFESSIONALIZATION ON COMMERCIAL (MARKETING AND COMMUNICATIONS) POLICIES AND STRATEGIES		X	X partial

⁶⁵ Source: The author, based on Documents analysed, observational data, interviews and the research itself

In the following sections, these impacts will be described in detail according to each of the elements.

Governance and structure

In terms of governance and structure, the introduction of credit frameworks has catalysed an important structural reduction or structural transformation at the universities studied (see Table 6). In the case of the structural reduction, the number of programs, departments, and faculties have been reduced or consolidated, and therefore fewer departments were able to coordinate more areas in an interdisciplinary model. Hand in hand with the structural transformation, universities have evolved in institutionalisation. This has implied new coordination units or departments, new central policies, more supervision and control at the central level along with changes in decision-making, and distribution of power. Regarding the universities studied, it is still up for debate whether the implementation of credit frameworks has ultimately resulted in more centralisation or decentralisation. However, it is clear that centralisation seemed to at least be an initial stage in order to fully implement credit frameworks. The introduction of credit frameworks has also generated an additional debate inside the universities regarding the institutional idea of corporate governance or institutional governance. Hence, many universities are now undertaking changes in terms of this, especially in relation to external participation in government issues at the institutional level.

The movement towards a more centralized management structure required new ways to organize institutional processes and procedures and also new ways in which the academia and the administration were able to work together more smoothly, an issue which in the past had not worked this way.

Finally, the universities studied have changed their infrastructure to accommodate more students, more programs, and a reorganization of the academic curriculums. As found in the study, these changes in infrastructure were a consequence of the implementation of credit frameworks. This quote is an example of this.

The university today is in the implementation of its development plan. It is seriously considering the construction of a new building due to the fact that credit frameworks implied a new way to deal with groups of classes. The way we managed this historically is not useful anymore (University A, Tape Recording No. 5, Director of Admissions, Registrar and Control).

Culture, Values and Institutional Identity

The implementation of credit frameworks has also implied the need for a new management culture, which must understand that change (See Table 7). This new culture places a high importance on planning as well as developing connections and teamwork between academia and the administration.

Our university has learned a lot about planning and tactics. Now we have more precision in our use of resources, the destination of resources, and how resources affect financial statements (University C, Tape Recording No. 4, Planning Director).

The change to credit frameworks was a challenge and it was possible due to teamwork. Professors from different faculties worked together in many ways...we did not work as isolated islands...we built a culture in which we were all involved and we all knew about the credit framework (University A, Tape Recording No. 8, Professors).

...These confirmed something that was not easy. It was the understanding (of relationships) among academia, administration, and financial issues at the university. This obliged the university to create new units in each faculty able to interpret the relationships between academia and the administration...this has happened during the last 12 years and has been one of the successful key factors in attaining our goals (University B, Tape Recording No. 4, Deputy Director of Finance).

Another issue related to university culture was the introduction of new regulations, rules, and norms, which now exist to organize matters related to credit frameworks. The most advanced universities in the implementation of credit frameworks have gone further having multiple changes in multiple types of regulations.

Following the curriculum changes, we developed new institutional norms. First, the undergraduate student regulations...then the postgraduate student regulations (University B, Tape Recording No 2. Vice-Rector).

Finally, in some of the universities studied, the credit frameworks catalysed the development of a culture of service, and in some cases an existing culture of service was necessary to implement credit frameworks followed by a less paternalistic attitude towards students and professors. Once the framework was implemented (especially in those universities more advanced in the change process), a culture of negotiation among faculties followed. This culture of negotiation became important in order to take advantage of an important benefit of credit frameworks interdisciplinary programs and interfaculty exchange.

Internally at the faculty level, the topic of negotiations appeared. Each faculty decides what to offer based on their accumulated knowledge, how to offer that knowledge or programs to other faculties, and what to demand from other faculties. It starts a negotiation process among faculties and it changes the traditional autarkic mentality...now faculties think about what to offer, what to demand in terms of subjects, and academic credits (University B, Tape Recording No. 10, Director of Registrar).

Still in progress remains the development of a more transparent policy about information in the universities less developed regarding the implementation of credit frameworks, and the continuous need to implement the discourse and narratives with the students and professors about the positive things that the implementation of credit frameworks can bring to the university culture.

Managerial practices and techniques

Cultural and governance changes related to the introduction of credit frameworks also helped to introduce new practices and techniques (See Table 8). These new practices and techniques were most common in the curriculum and professorial management in all of the universities studied. Changes in management practices and techniques resulted in new ways to administrate academic programs, new needs to construct mentoring and tutoring systems, and new ways to

build academic communities while at the same time putting in place the flexible regimes necessary to implement credit frameworks.

When building academic frameworks we started to offer new things. We started internal double degrees...having the possibility to mix students from different programs and departments...we could also mix undergraduate students with postgraduate students...It gave birth to new programs such as 'coterminales' which is the possibility to link postgraduate with undergraduate programs (University B, Tape Recording No. 6, Director of Registrar Academic).

A less intended, or expected, consequence was the development of new marketing rationalities and structures. This was particularly interesting in the case of the public university (University C) included in the sample, because the implementation of credit frameworks allowed the administration to build new academic programs due to the ease of program creation and the possibilities of building double degree structures.

Finally, among the new practices developed due to credit frameworks, each university studied included the following albeit to varying degrees: the implementation of new information systems (registry, academic control, financial and administrative management), the development of Learning Management Systems (LMS) to promote new forms of learning, the introduction of new budget systems due to new forms of income and expense procedures, and the development of new forms of communication with the broader community. All of these new practices implied new demands of the administrative staff in terms of professionalism, abilities, and competencies. Also, these practices allowed the universities to be more efficient and effective in the service they provided.

The university was using an information system with which it managed the relationship between the student and the university...today we use a different platform that also allows also the use of our web page. The student community, with this new system, can consult and manage their academic experience (University A, Tape Recording No. 5, Director of Admissions, Registry and Control).

We are still not attaining certain goals in terms of academic flexibility for the students including student mobility...in terms of management, we have developed an integral management system...we have also implemented an information system which integrates matters such as financial issues, human resource management, and curriculum management...however with this new curriculum, policies costs have grown...we are starting to understand why... (University C, Tape Recording No. 4, Planning Director).

Adaptability and resilience

The last element that has changed, although to a much lesser degree, with the introduction of credit frameworks, was the ability of the university to adapt resiliently to the process of change. According to the literature this should be something to be expected, but in the universities studied this is only starting to be the case in the most developed university regarding the implementation of credit frameworks.

All of the universities studied believed they needed to be much more resilient and recognized that creating a culture of change was an initial step in this process. Something additional founded as another initial step on this track is the interest of the universities studied to learn

from other universities in the world and develop a benchmark strategy from other good practices.

Regarding ability to adapt and resilience, we are still far away. We are not close to having satisfactory change capacities and future awareness. We are still slow to respond to the environmental change. We are still missing this (University C, Tape Recording No. 4, Planning Director).

This credit framework implementation has made us more creative in solving problems when they appear. We now have to have solution plans B or C in advance in order to solve problems that appear (University B, Tape Recording No. 12, Professors).

Thanks to credit frameworks, we started to do benchmarking in the USA and we started to compare and quantify our programs with other programs from around the world...we also compare our institution with other universities in Colombia. We followed the Universidad Javeriana experience closely (University A, Tape Recording No. 2, Academic Provost).

Finally, some of the universities studied, especially the most developed ones, have even evolved in terms of developing a special ability and capacity to grow in programmes and students and are implementing policies to answer to new needs identified in the market. This process of innovation is still in progress and requires more instruments to be a full example of adaptability and resilience. In summary, this is still an inconclusive matter of change in the Colombian higher education sector.

Conclusions

The conceptual and methodological approach taken combines response to the environment (which could include resource dependencies) with the social and cultural context. Therefore, this approach implies not only a technical construction but also an ideological construction including values, ideas, assumptions, principles, and particular views and practices.

The data in Table 1 shows that when implementing credit frameworks, universities in Colombia were actually responding to three challenges: 1) the obligation and commitment to become better (Quality assurance), 2) the need to be more international and competitive, and 3) the need to respond to certain financial and administrative difficulties. According to these, credit frameworks could be seen as a new technique that helps them become better, more competitive or even able to generate more income and solve inefficiencies.

However, based on the data in Tables 2 to 5, and as explained before, the particular structural features and the cultural identity of the universities, could also explain an important part of this change process. This research found that this was true since there are differences in the process of implementing credit frameworks based on different internal cultures, different actors or stakeholders (students, professors, university managers), different levels of the managerial positions (top level positions versus managerial positions), and different types and complexities of universities studied.

As expressed in this chapter, institutional culture and features cannot be taken for granted when implementing credit frameworks. In fact, cultural issues and institutional managerial features have changed (Tables 3 and 4) and also they have influenced the implementation of credit frameworks. In the Colombian higher education sector, a movement is perceived from traditional, feudalistic and paternalistic cultures to more open, competitive and modern cultures. This transformation is forcing universities to be more accountable and institutionalized, in

which credit frameworks becomes a relevant cause and consequence of this transformation. This also has implied new narratives in the university administration in which matters frequently appear like competitiveness, professionalization, service, planning, institutionalisation, accountability, and efficiency. Therefore, nowadays in the Colombian higher education sector, credit frameworks have become more than a particular technique, influencing a different vision and internal understanding of the university management and also transforming the particular university culture.

In conclusion, based on the conceptual approach described in this study (Chapter 3), and as found in this chapter of findings, universities in Colombia with the process of implementing credit frameworks, are experiencing growing interest in: strictness in financial management, use of performance indicators, more preoccupation about efficiency and institutional monitoring, teamwork, professionalization, institutionalization, use of cost centres, and competition among faculties and departments. But also, universities in Colombia are managing all of these differently accordingly to their culture and institutional features. The conceptual approach used in this study could then be seen as a way to understand this process of change in the Colombian universities.

Chapter 7: Conclusions and the Personal Journey

The Colombian Higher Education Sector has faced new and profound transformations since 1992. That year, the introduction of a new Constitution, the growing concern about quality assurance and accreditation, and the government's interest in making information about the higher education sector transparent, as well as the pressures of internationalization, were in large part responsible for the changes to universities in Colombia. This resulted in new managerial demands for universities and the implementation of new processes and systems that have scarcely been studied. As a consequence, Colombian universities have been undergoing a process of change in a "learning by doing" manner with all of the disadvantages of operating in this way. This research study explored this poorly studied topic in Colombia and Latin America: the causes and consequences of the introduction of credit frameworks, a particular issue closely related to the national trend towards more accountability and institutional quality assurance. Previous studies have approached this topic to look at the relationship between credit frameworks and learning. However, this research study instead explored the relationship between university management and the implementation of credit frameworks. This relationship between management and the implementation of credit frameworks is not well researched in Colombia, even though it is an important topic due to the immense impact it has on higher education institutions.

The topic of this research study was complex and thus a linear approach was insufficient. Instead, this research study used a contextual and processual methodology. This allowed content, context, and the process of change to be considered and simultaneous and non-linear relationships to be understood. The implementation and impact of credit frameworks is part of a complex change process faced by universities in Colombia. Thus, this complex reality can be understood as content, which exists within a context, and is a part of a process. In terms of content, the majority of the time credit frameworks are just presented as a model to quantify or qualify the curriculum without being fully understood by university management. However, this research took into account that credit frameworks must be understood within the context of change in the Colombian higher education system. This means that each university and even each faculty has different ideas about the purpose and impact of credit frameworks. Furthermore, when researching the process of change needed to implement credit frameworks at universities, one must understand that management and the implementation of credit frameworks are forces affecting each other, and therefore management could be seen as a catalyst for the implementation of credit frameworks, and simultaneously the credit frameworks can be seen as a catalyst for changes in university management. The idea was to study in depth how the managerial model of higher education was prepared, or was being prepared, for the introduction of credit frameworks, and how this was transforming the previous understanding of university management. The research study recognizes there are many matters that can also change in the teaching and pedagogy areas of the universities, but those topics were not deliberately studied and included in this research, although they were highlighted throughout this research.

Of central interest to this research study was how management catalysed the implementation of credit frameworks as well as how management was itself transformed by this implementation. The discussions which are happening in Europe with the introduction of the European Credit Transfer System (ECTS), as well as similar debates happening in Latin America, are generating concerns about the impact of credit frameworks, the best way to implement them, and the intended and unintended consequences. In the case of Colombian universities, credit frameworks were largely implemented in 2002. However, this change has not been studied adequately and universities implemented the credit frameworks at different levels of implementation and many are now facing troubles and unexpected consequences. Many of these

consequences could have been anticipated and avoided based on other universities' experiences. At the same time, universities with advanced implementation could teach universities with a less advanced level about many of the expected and desired consequences and best practices of implementation. This research study is opening a new topic of research in Colombia, which can enlighten the process of change in many of the universities in the country and offer a new understanding for the academic policy formation and academic policy implementation in Colombia.

Furthermore, this research study was not trying to build a cause-consequence model between credit frameworks and university management. Instead, this research study understood that both matters are agents in the process of change, and both are being transformed in a mutual relationship. This means that, on the one hand, the introduction of credit frameworks is changing the managerial model of universities. But, on the other hand, the university management is also interpreting, using, and transforming the idea of credit frameworks to adapt it to the university's own purposes. In order to fully understanding these two dynamics, one must study the credit frameworks hand in hand with university management and within the context of change happening at the universities. Based on this idea of studying credit frameworks and management within the context of change, the first question posed by this research study was: How did universities in Colombia understand the concept and purpose of credit frameworks?

Based on the theory from the analysis of the literature, the research found that credit frameworks were viewed in different ways by universities. According to the literature, not all universities understood credit frameworks as having the same purpose. Some universities understood credit frameworks to serve the purpose of a quantitative tool to transform and quantify a curriculum. Other understood credit frameworks as a regulatory command and something that must be implemented according to the law. Still other universities interpreted credit frameworks as a key mechanism to transform their curriculums, and others thought of credit frameworks as a quality assurance mechanism. Furthermore, the literature described that based on these understood purposes, credit frameworks were helping universities to attain more flexibility, international and national mobility, quality assurance, and offer double degrees.

Based on all of these concepts and purposes, the research study proposed an understanding of credit frameworks implementation that was to be challenged with real cases of the universities studied. This research study recognized that that credit frameworks correspond to radical changes in terms of curriculum design, educational structure and content, delivery of education, the learning process, and its assessment. Credit frameworks create a particular form to codify, quantify, stratify, structure, and convey information in non-academic language for comparability, equivalence, mobility, recognition, transfer, accumulation and quality. Although studying these concepts seemed to be quite complex and ambitious, the idea was to create a comprehensive study regarding the ways Colombian universities were implementing credit frameworks and how they were responding to laws and regulations governing this implementation.

Once the researcher arrived to the universities in Colombia, which were to be studied, it was clear all these universities had differences in their understanding of the concept and purposes of credit frameworks. The research found two kinds of gaps, one between the official narratives about credit frameworks purposes and the actual purposes attained, and the second gap between the initial expectations and concept of the frameworks and what was actually taking place. These gaps depend on the leadership at the top level, in addition to the academic culture of the university and the social appropriation of the framework. This means that universities with stronger leadership at the academic-directive level, a more deliberant academic culture and better social appropriation of the framework, usually decrease those gaps and become better implementers of the credit frameworks. In addition, the understanding of the credit frameworks varies according to the evolution of the implementation. Those universities less advanced,

usually see the credit framework just as a consequence of other issues (regulations, quality demands, internationalization etc.), while for the more advanced universities, credit frameworks become consequences and causes of future transformations of the universities (including increasing quality).

The second question posed by this research was regarding the main causes that have catalysed the introduction of credit frameworks in Colombia. The research methodology of this study was designed to understand the context of change, meaning the key determinants or trends, which have been changing the bigger picture affecting universities over the last ten years. These included trends like globalisation, internationalisation, demands for quality assurance, growth and massification, market competition and curricular transformations. All of these matters have created a reality in which universities are dealing with new issues and challenges.

In addition, the study took into account the situation specifically in Latin America and Colombia. Many of the macro trends were happening similarly specifically in this region. However many additional trends appeared such as the funding problems faced by the universities, new and increasing concerns about students' access to the university system, and the appearance of new legal and regulatory requirements. These trends were critical to consider when explaining changes in the higher education sector in Latin America and Colombia, since certain ones of these trends were unique to this region and not common internationally or in developed countries.

Finally, the research discussed the microenvironment. This meant understanding the institutional factors that influence, or are being influenced by, the process of change. This included understanding different dimensions of culture and the institutional ethos. Based on this culture and ethos it was possible to understand actions which catalysed the implementation of credit frameworks as well as reactions to the implementation in the universities included in the sample.

In order to understand the determinants in the process of implementing credit frameworks, this research challenged two possible approaches (a resource driven explanation as opposed to an institutional explanation). What was found is that universities in Colombia, when implementing credit frameworks, are responding to three challenges: First, the obligation and commitment to improve their quality, second, the need to be internationally competitive and third, an answer to financial and administrative distress. In particular the first two determinants differ in the universities studied according to its level of development. As an example, for the less developed universities, quality is just a matter of regulation (norms), while for the more developed universities, quality becomes an institutional commitment. Similarly, the less developed universities understand internationalisation as just a topic of student/professor mobility, while the most advanced universities understand internationalisation as a path to be more relevant and competitive.

However, it was also found that particular features and institutional culture could explain an important part of this process of change, since they can influence and explain differences in the implementation of credit frameworks. In conclusion, credit frameworks have become more than a particular technique or instrument, influencing a different vision and internal understanding of the university management and also transforming the particular university culture. Based on these, the research found that following the new managerialist approach described in the literature, universities in Colombia, with the process of implementing credit frameworks, are experiencing growing interest in: effectiveness in financial management, use of performance indicators, more preoccupation about efficiency and institutional monitoring, teamwork, professionalization, institutionalization, use of cost centres, and competition among faculties

and departments. But also, universities in Colombia are managing all of these differently according to their culture and institutional features.

At the micro level for example, the institutional culture became a key determinant in the process of change to introduce credit frameworks. In particular, universities found that teamwork and leadership were important issues in the implementation of credit frameworks. The possibility to build compact teams (including administrative, directors, professors, and students) at the university helped with the introduction of credit frameworks, since it was easier to deal with difficulties and to solve problems. Similarly, the presence of directive leadership became a critical issue when introducing a change as difficult and complex as the introduction of credit frameworks.

Finally, this research study answered the questions regarding the interplay of university management and the implementation of credit frameworks. How were Colombian university management systems impacted by the implementation of credit frameworks? The answer to this question is critical now that universities that have introduced credit frameworks are facing tensions and are struggling to adequately lead the process of comprehensively implementing credit frameworks and other changes related to this implementation. The answers in this portion of the research were critical because, as discussed previously, finding studies on managerial topics related to credit framework implementation is almost impossible. This could be due partly to the rather recent implementation of credit frameworks and because of the absence of available studies; universities lack useful information to learn about the process of change.

In order to be able to effectively study this interplay between university management and the implementation of credit frameworks, it was necessary to define the specific aspects of university management to be considered in this study. According to the conceptual framing presented, the concept of university management was to include four main topics: governance and structure; culture, values and institutional identity; managerial practices and techniques; and finally adaptability and resilience to change. Using these four topics, it was possible to understand concerns, catalysts, and consequences related to the implementation of credit frameworks in a comprehensive and structured way. However, this research study also took into account that additional actions, reactions, and micro situations exist which internally help or hinder the implementation of credit frameworks, and which can also impact university management. This means that the micro-level analysis and the micro politics of change, which can be contradictory and ambiguous, actually can influence the process of change to implement credit frameworks.

The last part of Chapter 3 covered as many possible relationships between credit frameworks and management that could be found in the existing literature. In terms of governance, this research study found that the main issues were changes in the structure of universities. This meant reduced or reengineered structures, but the debate remains open whether it meant a move to more or less centralisation. What was clear was that universities have taken advantage of credit frameworks to be more efficient in their structures and to increase coordination of procedures and policies. In addition, this research found that the implementation of credit frameworks is opening new questions and debates about the governance of the universities and how to redesign it.

Another issue studied related to governance and structure was the new importance given to new processes and new procedures at universities. Without a doubt, universities have transformed their models of management, and have institutionalized the changes through the addition of new policies, rules, procedures, and better documentation processes. This has led to a new culture of planning, accountability, and control. In addition, a growing importance has been placed on leadership, teamwork, and linked processes between administration and academia, including a greater willingness among departments and faculties to negotiate issues.

The introduction of credit frameworks was also accompanied by new managerial practices and techniques. Some of the most common ones included new mentoring and tutoring programmes, increased focus on the market and the development of new marketing structures, the implementation of information and financial systems, and the growing concern about the professionalization and specialized training needed for the academic and administrative staff working on implementing credit frameworks.

In terms of micro politics, critical actors were identified as well as common reactions to the introduction of credit frameworks, which are still happening in the universities studied. This means that the process of change is still on going in all of the universities studied, even in the ones with a more advanced implementation of credit frameworks. Another fact discovered was that usually there appeared some faculties or departments which played a critical role in shifting paradigms for the rest of the university, and helped to go further the implementation process. Finally, another important trigger was the use of external people outside of the traditional culture of the university who were more open to the process of change to assist in implementing credit frameworks,

Finally, a risk that appeared in some universities was the possibility to regress in the implementation of credit frameworks. The reasons for this came from difficulties, lack of knowledge about the process, debates about bureaucratization, administrative and academic difficulties, and confrontations or conflicts among those implementing credit frameworks. Although the universities were experiencing these troubles, they all tried to work through these challenges and agreed that the bigger impact and opportunities of implementing credit frameworks were important and positive for the future of the universities. In the next section I turn to the current situation and future perspectives as related to my research.

Current Critical Situations and Future Perspectives

Current critical issues could be summarized as inefficiencies, chaos and bureaucratization in the implementation process, excess of control and surveillance, conflicts with more centralisation, and reactions against the implementation coming from academics.

Based on this research and findings from the case studies, areas of tension were found in the administrative and academic matters. Those issues are now being dealt with by the universities in Colombia and could define the future track of the implementation of credit frameworks at the institutional and national level.

At the administrative level, this study confirms a tension about managerial bureaucratization, derived from an excess of rules or excess of institutionalisation. In other words, some universities discussed a large amount of procedures, control and surveillance, which is generating longer and difficult decision making processes. This topic is leading to new debates about governance at the institutional level and how to overcome possible trends towards more feudalism as a response to this issue.

The second tension is more practical, and it refers to redefining the fee structure and procedures in order to avoid a negative financial impact on universities. As found in all the universities, this is an unfinished issue that is now part of the internal agenda of all the universities studied.

A final administrative matter, which is a way to solve the last two, refers to the need of a special, active, more democratic and stronger leadership team when dealing with the credit framework implementation. Professors, for example, identified as an important catalyst for the

process of implementation, the presence of a strong Deanship or directive leadership involved in the process:

I had the chance to be involved in the implementation of credit frameworks and the faculty of law...initially it faced a reaction against the model by professors, but the system was very attractive for the students.... a strong leadership by the Deanship was very important in order to consolidate the system. This has built stronger teamwork (University B, Tape Recording No. 12, Professors).

Regarding academic difficulties, on the other hand, the research found a critical issue in the current use and abuse of the credit frameworks by students, difficultness in the appropriation (by different stakeholders), and a relative lack of homogeneity in the process of credit framework implementation. Finally, the research found important differences in expectations about the credit framework usefulness (especially among directive, institutional, professorial and student expectations).

Some students are seeing the credit framework as a way to have “easier paths,” an issue which implies concerns about quality and rigour. Others see the framework as a way to lose identity and even quality in universities that were traditionally more personalised and paternalistic:

The introduction of credit frameworks has changed the relationship among the university, the curriculum, and its students...the student identity with the group is not possible anymore (University B, Tape Recording No. 9, Quality Assurance Manager).

The university has abandoned the idea of being paternalistic with the students. Now (with the introduction of credit frameworks) it confronts them (University B, Tape Recording No. 5, Dean).

In terms of academic expectations, there are still troubles since the lack of training and difficulties with the institutional communication of the framework is leading to large differences in the way professors and students, for example, conceive the importance of the credit framework. Students, for example, saw in credit frameworks great opportunities in terms of international mobility, ways to graduate faster and enter the job market earlier, and more possibilities to choose their own subjects and develop their own academic path. Professors and the institution itself, see the system differently, emphasizing more the general advantages like flexibility, internationalisation and active learning.

Finally, a critical factor for all the universities studied was that the process of change is still in progress, and of course not without implementation difficulties. The negative reactions against credit frameworks by some of the critical actors in some cases were preventing the adequate implementation of credit frameworks. In some universities there even existed an interest in moving towards more rigid programs, faculty conflicts due to subjects traditionally offered by one faculty now being offered and managed by different faculties, and some spots of bureaucratization in the process of change.

In this moment (while facing budget problems with the implementation of credit frameworks), some people are trying to go back and retrocede in the implementation of credit frameworks because people have fears...(also) some faculties are making noise about keeping the old curricula system (University A, Tape Recording No. 3, Dean).

What is clear is that the implementation of flexibility in the curricula management was always preferred to any other alternative or possibility of going back to a more rigid structure. Even those spots of confrontation or differences could be seen as a means of learning to improve the process of change and implementation and continually improving it.

Even through difficulties, if we were to choose between a rigid or a flexible model of the curriculum, we would choose and pick a flexible regime (with credit frameworks)
(University A, Tape Recording No. 9, Students)

My Personal Journey

Travelling down this path of intense research has also been a great personal journey of learning, professional and academic development, and insights into my own model of management. In addition, this research study has been an opportunity to learn more about a topic currently debated in Latin America. Finally, it has provided an opportunity to develop methodologies of institutional research, which could be applied to studies of other matters.

Regarding the lessons learned to improve the institution I am currently leading⁶⁶, the research has helped me to better develop my own ideas about our current curricula transformation. Although this institution introduced credit frameworks more than five years ago, the implementation has had many flaws and difficulties. This research study helped me to understand this topic in more detail and helped me to improve those flaws and better develop the process of change. In addition, the research gave me a new and complete understanding of the large changes and trends faced by universities in the world and especially in Colombia. Having learned this has helped me with the introduction and implementation of our institutional strategic plan which started in 2009 and which has evolved over the last several years⁶⁷. The possibility to deeply understand the main determinants of change in Colombia has provided me with more wisdom about key new policies needed and knowledge to advocate for those issues.

Another important way in which this research has benefited my own development is the abilities I gained (such as the ability to study a process of change), which in the future, can help me with policy formation. These abilities can help me to build norms, policies, and rules in my own institution of higher education, and could also help me contribute to national policy making should I be in that position in the future. I have included as part of my management tools the important ability to learn from others and from others' experiences. In a way, my traditional style of management and policy formation had been more endogamic. In addition, this research study has revealed to me the need to study the impact of credit framework implementation on pedagogy in the university, which was not a focus of this research but that I found was an important aspect in the universities studied.

Based on the institutions studied, which are representative of other similar universities in Colombia, I have found that many other universities are facing similar difficulties. They all need to build a growing community interested in implementing the credit framework, which requires more information and training about the topic. In addition, a key aspect is to build a common understanding of credit frameworks including the possible expected and intended consequences. I have found also that credit frameworks are a great opportunity to internationalise our universities and although there are inevitable problems with the implementation, the change towards it, even with those difficulties, is worth it.

⁶⁶ I am the current (since 2009) President and Dean of a prestigious school of business and a higher education institution in Colombia called Colegio de Estudios Superiores de Administración (CESA).

⁶⁷ This has also helped me to develop the new Strategic Plan for 2014 – 2020 for the institution I am leading.

In terms of this personal journey I have found not only new ways of thinking, but I have also learned lessons about my personal style of management.

In terms of my way of thinking, this research initially, and very importantly, has motivated me to do more research in many other topics on higher education. This research has forced me to publish more academic works, specifically in important academic journals on topics related to the higher education in Colombia. During the last years, I have published more than seven academic articles that have been important ways to improve my knowledge about the higher education sector. Recently, these articles helped me, together with two other researchers from my institution, to win a grant from the government to develop a very important research study on corporate governance in higher education institutions⁶⁸.

This research has also raised for me an additional concern, which could even be another topic to research. I have seen that in general, university students tend to be less aware of the chronology (past, present, and future) of a process of change in a university. This means they are less eager to help with the implementation of a change process unless they can quickly and easily see changes and results. The reason for this is that usually they only care about current changes with clear current impacts. In other words, university students see “photographs rather than films” in the implementation of changes at their institutions. This seems to be a key issue when managing higher education institutions in which students are considered to be a key stakeholder and even more in those higher education institutions in which students play a remarkable role or institutions which happen to be small in size.

Another aspect that I want to highlight is how this research inspired me to develop a new line of research at CESA given my knowledge about higher education. I motivated other important professors, who are experts on management, to build a new line of research. The idea is to study high school and university management as a topic of research. Based on this we have published articles and gained interest from funding agencies and others in the sector to work with us and contract us to do research and provide consulting on the topic.

In terms of my personal style of management, the research has helped me to:

- Implement a new office at CESA called the Institutional Analysis Department. This new office was created to do research on our own institution. The idea is similar to an action research department, which is helping me to better implement changes and our strategic plan.
- To get a better understanding of an institutional process of change in universities. Now I understand many things that could have been helpful in my previous positions to implement changes. An example is the importance of studying the institutional context and culture, in addition to the topic of micro politics, in the process of change.
- To be more analytical and reflective in the policy implementation or in the change process implementation. The majority of the time, I used to implement changes, but in very few of those cases would go back and study the change to evaluate if it was properly implemented. This research study has helped me to see the importance of this best practice, because much is learned when you study your own practices to discern which ones are positive and negative and what types of impacts you are creating.
- Learn the importance of developing benchmark studies like this one. I previously conducted benchmark studies using only data or statistical information. With this research, I learned how useful it is to initiate personal contact and conduct interviews with people involved in the process of change to understand their views about the change. I now use this way of

⁶⁸ The research study is called *Corporate Governance in Higher Education Institutions in Colombia* and is funded by my institution (CESA) and the Minister of Education through a grant called *Studies of Higher Education*.

learning from others' real experiences in the research studies I conduct such as looking at managerial issues or implementation processes.

It is important to highlight findings and possibilities for other universities and experts on higher education in Colombia and in other countries. On one hand, this document develops a special approach to the process of change in any institution using a particular contextual-processual model, which can be used for any other transformation or change in higher education institutions. This model represents a different approach and implies new professional practices in higher education leading to a different way of understanding institutional transformations.

On the other hand, this document represents a unique approach in Colombia to the university management and its relationship with credit frameworks. It provides colleagues in the higher education system reminders, lessons, warnings, and best practices in implementing credit frameworks. These issues are still very important for many universities in the country who are currently implementing credit frameworks and are having difficulties. Finally, it provides a deep insight into the main determinants of change in higher education in the world, in Latin America and in Colombia. This approach can be useful to understand other processes of change, which are affecting universities and can be utilized in the case of Colombia as a very complete understanding of the university environment.

In conclusion, given the specific topics developed in this research and the entire work of this research study, this has been a valuable opportunity to learn and to develop new ideas and concepts about a topic which should have been studied many years ago in the Colombian higher education sector, and which will be useful for professional practices in higher education management and policy creation.

Appendix 1: Interview Format 1

THE CONTENT AND CONTEXT OF CHANGE

Initial questions selected for the in-depth interview in order to understand the content and context of change in each of the universities included in the study.

In this interview, I would like you to answer as deep as possible some questions about the content and context of the process of change in your university. To help you answering these, let me give you some initial questions⁶⁹:

1. Do you find transformations in the context of higher education which have affected your University during the last five years? Do those transformations respond to international/national trends in higher education or even external pressures?
2. Describe the main changes which have happened in your University during the last five years, explaining causes and consequences.
3. How management practices are characterised in your university and have they changed during the last five years?
4. Tell me about the reasons/causes for changes in management practices in your university.
5. Given Script A (Appendix 6), do you recognise such process in your university?
6. Tell me about the implementation of credit frameworks in your university (causes, process, and consequences)
7. Do you find any relationship between institutional management practices and the implementation of credit frameworks in your university?
8. Tell me your perception about how credit frameworks respond to changes in the context of higher education
9. Tell me about the easy and hard tasks when introducing the credit frameworks in your university.

PROBES INTERVIEW I

THE CONTENT AND CONTEXT OF CHANGE

- A) Main determinants/drivers in the process of change in Higher Education:
 - a. Globalisation
 - b. Internationalisation
 - c. Massification/ Growth in the higher education system
 - d. Access
 - e. Quality Assurance
 - f. Financial matters
 - g. Competition / Market driven mechanisms
 - h. Curriculum transformations /curriculum mode 2
 - i. The Knowledge Society
 - j. Others
- B) Main changes at the institution/University
 - a. Causes
 - b. Consequences
- C) Management Practices
 - a. Characterisation of management practices within the institution/university
 - b. Main changes
 - c. Causes and consequences of these changes
- D) Credit Frameworks
 - a. Understanding/interpretation of it
 - b. Implementation of credit frameworks
 - i. Causes/process of change itself/consequences
 - c. Relation with management

⁶⁹ These questions are just preliminary because they can change during the interview and they follow and complement Restrepo (2006c).

Appendix 2: Interview Format 2 ⁷⁰

INSTITUTIONAL CULTURE⁷¹, CONTEXT AND CREDIT FRAMEWORKS

These questions will be developed during the in-depth group interviews with students and professors separately. Before the interview starts, Script A (Appendix 6) will be read.

BREAKING THE RULES AND SOLVING CHALLENGES

In this part, I would like you to remember and analyse situations in which you can illustrate how things have changed in the university, by which it is possible to identify a “before and after” of the institutional culture when implementing credit frameworks. In other words, to recall situations that could characterise changes of the culture at the university. I would like you to relate your answers to any of these variables:

1. Leadership and role of the authority in relation to the organization (Management, decision making)
2. Ways of working together
3. Ways of communication
4. Attitudes towards change
5. Conflict resolution

To help you answering these, let me give you some questions related to the implementation of credit frameworks:

- a. Briefly describe what has happened?
- b. What rules became suddenly visible through the implementation of the credit frameworks?
- c. How did you feel with the change? Was it a shared feeling?
- d. What did you hear from your friends or colleagues/fellows about that change?
- e. How do you relate your answers with the culture of the university?
- f. Has anything changed since that moment? What and how?

PROBES INTERVIEW II

INSTITUTIONAL CULTURE, CONTEXT AND CREDIT FRAMEWORKS

- A) Dimensions of institutional culture in relation with credit frameworks
 - a. Leadership and role of the authority
 - b. Ways of working together
 - c. Ways of communication
 - d. Attitudes towards change
 - e. Conflict resolution
- B) Key actors involved in the implementation of credit frameworks and its change
 - a. Directives (Rector, Vice-Rectors, Deans)
 - b. Professors
 - c. Managers
 - d. Students
 - e. Others
- C) Attitudes towards change with the implementation of credit frameworks

⁷⁰ These questions follow Restrepo (2006c) which used the model proposed by Marshall and McLean (1988b), which answers the questions of how to identify and understand culture by recalling situations in which rules are broken and challenges solved.

⁷¹ Culture will be understood in a very simple way as “the way things are done around here.”

- a. Actions
- b. Reactions (enthusiasm, pragmatism, sceptics, others)

D) Cultural transformations

E) Determinants of different actions and reactions

- a. Individual feelings
- b. Institutional culture (Institutional ethos)
- c. Institutional history/features (size, purposes and mission, organisational forms, power and authority, status, student profile, geographical location, others)
- d. Difficulties in the implementation of credit frameworks

Appendix 3: Interview Format 3

THE PROCESS OF CHANGE: CREDIT FRAMEWORKS ACTORS AND ACTIONS

Initial questions included in the selected in-depth interview in order to understand the actor and actions in the implementation of credit frameworks

In this interview, I would like you to answer as deep as possible some questions about the process of change in your university with the implementation of credit frameworks (Read Script A in Appendix 6). To help you answering these, let me give you some initial questions⁷²:

1. What has been your role in the process of change in your university?
2. Who are the main actors in the process of change in your university? What are the main actions implemented due to them?
3. Given Script A (Appendix 6), do you recognise such process in your university?
4. Were you or are you now involved in the implementation of credit frameworks in your university? How?
5. Tell me about the main actors involved in implementing credit frameworks in your university. Tell me about how they have worked together?
6. Tell me about the implementation of credit frameworks in your university (causes, process, and consequences)
7. Given these definitions (Script B (Appendix 7)). Do you find changes associated to the implementation of credit frameworks in your university in terms of⁷³:
 - a. Governance and structure
 - b. Culture, values and institutional identity
 - c. Management practices and techniques
 - d. Adaptability and resilience (Relationship with the environment)
 - e. others

PROBES INTERVIEW III

THE PROCESS OF CHANGE: CREDIT FRAMEWORKS ACTORS AND ACTIONS

- A) Key actors involved in the institutional process of change
 - a. Directives (Rector, Vice Rectors, Deans)
 - b. Professors
 - c. Managers
 - d. Students
 - e. Others
- B) Credit Frameworks
 - a. Understanding/interpretation of it
 - b. Implementation of credit frameworks
 - i. Causes/process of change itself/consequences
 - ii. Key actors involved in the implementation of credit frameworks
 - c. Relation with management in terms of
 - i. Governance and structure
 - ii. Culture/values/identity
 - iii. Management practices and techniques
 - iv. Adaptability and resilience (Relationship with the environment)
 - v. Others

⁷² These questions are just preliminary because they can change during the interview.

⁷³ The participants will receive a small document in which these concepts will be explained according to the definitions of the research study.

Appendix 4: Interview Format 4

THE PROCESS OF CHANGE: DYNAMICS OF THE PROCESS

Initial questions included in the selected in-depth interview in order to understand the Dynamics of the process of change in each of the universities included in the study due to the implementation of credit frameworks

I would like you to answer as deep as possible some questions about the process of change in your university due to the implementation of credit frameworks. In particular it is important to relate the temporal interconnectedness (past, present and future of the change). To help you answering these, let me give you some questions⁷⁴:

1. Thinking about the future and based on the past and present of your university, do you expect more changes? Which ones? Why?
2. After reading Script B (Appendix 7), please refer to expected changes in terms of⁷⁵:
 - a. Governance and structure
 - b. Culture, values and institutional identity
 - c. Management practices and techniques
 - d. Adaptability and resilience (Relationship with the environment)
 - e. others
3. Given Script A (Appendix 6), do you recognise such process in your university?
4. Do those changes refer to the credit framework implementation? To what extent?
5. Tell me about the implementation of credit frameworks in your university (causes, process, and consequences)
6. What problems and challenges have you faced with the implementation of the credit frameworks? How have you solved them?

PROBES INTERVIEW IV

THE PROCESS OF CHANGE: DYNAMICS OF THE PROCESS

- B) Main changes at the institution/University
 - a. Changes that have happened in the past
 - b. Future and expected changes to happen
- C) Credit Frameworks
 - a. Understanding/interpretation of it
 - b. Implementation of credit frameworks
 - i. Causes/process of change itself/consequences
 - ii. Difficulties in the implementation of credit frameworks
- D) Main changes in the institutional (university) management in terms of
 - i. Governance and structure
 - ii. Culture/values/identity
 - iii. Management practices and techniques
 - iv. Adaptability and resilience (Relationship with the environment)
 - v. Others

⁷⁴ These questions are just preliminary because they can change during the interview and they are based on Restrepo (2006c).

⁷⁵ The participants will receive a small document in which these concepts will be explained according to the definitions of the research study.

Appendix 5: Confidentiality Agreements

Model of agreement to be used before starting the case study in each of the universities included in the research

Date XXXX

Dear

Name of the Rector

Name of the University

City of the University

I, **JOSE MANUEL RESTREPO ABONDANO**, identified as it appears on the foot of my signature, hereby commit to not disclosing any information and/or documents that have been indicated to me as confidential, including all kinds of documents related to the investigation project: “*Causas y consecuencias de la implementacion de sistemas de creditos academicos en la Gestión Administrativa de las Universidades*”, in which the University (name of the University) is presently participating.

I commit myself to respect the confidentiality of the methods, procedures, employees, clients and the general activities shown to me written, typed, magnetic or oral, directly or indirectly transmitted.

The present commitment implies, but does not limit itself, not to give, communicate, copy or inform anyone not authorized by the University, any information hereunder. The confidentiality does not include information that is publicly available, or that resulting from the research, without contravening the commitments of previous confidentiality agreements.

By this means I manifest and guarantee that, in all the documents or products resulting from the research, I will not mention the name of the University but only its general characterization. In addition, I guarantee the realization of a workshop at the end of the research in order to present preliminary results of it and improve them.⁷⁶

Sincerely,

JOSÉ MANUEL RESTREPO ABONDANO

C.C. No. 79.521.502 de Bogotá

⁷⁶ This idea comes from Pettigrew (1997) who recommends this kind of workshop in order to perfect the results from the research.

Individual Model of agreement to be used before starting the in-depth interviews

General Comments

You have been selected based on your work and job experience and job with the University (Name of the University). Your participation in this in-depth interview is completely voluntary. There are no rights or wrong answers; you are the expert building your institutional experience. The results of this interview will be compiled with others and with documents coming from the University. All of these will be analyzed in the final result of the research.

All information will be kept strictly confidential. No names or personal information that could identify you or your university which you work for will be used. All information will be kept in a secure place. If you require a copy of the final project, you will be provided with one when it is complete.

Signed Consent

Your permission on this form indicates that you have read and understood to your satisfaction the information regarding participation in the research. I thank you in advance for your participation. In no way does it waive your legal rights nor release the investigator from his legal and professional responsibilities.

The Interviewee

The Researcher

Appendix 6: Script A

Credit Frameworks

Credit Frameworks correspond to radical changes in terms of curriculum design, educational structure and content, provision (delivery) of education, the learning process and its assessment, by building a particular form to codify, quantify, stratify, structure and convey information in non-academic language for comparability, equivalence, mobility, recognition, transfer, accumulation and quality.

Appendix 7: Script B

University Management

There are at least four elements or categories of aspects which must be included when talking about university management:

- *Governance and structure*: This category includes organisational forms, charts and organisational design; leadership capability from the entire organisation and its directors and executives; decision making systems; organisation, distribution, structure, and dynamics of power and authority; installations and infrastructure; steering and coordination procedures or mechanisms.
- *Culture, values and, institutional identity*: This category includes the institution's mission and vision statements; principles, norms and values (institutional *ethos*); institutional identity (organisational meaning); plus all proposed objectives, policies, and strategies.
- *Managerial practices and techniques*: This category comprises all of the tactics and processes used to manage the institution, including technological management, marketing and commercial management, communication and information systems management, control and assessment systems, financial management, budgeting, resource allocation processes, quality assurance and performance evaluation management, human resource management, academic management, and service management.
- *Adaptability and resilience*: This category will work on how the university is able to change and adapt to transformations happening in its environment. This includes the capability to compete internally and externally, convergence with and divergence from similar institutions (including the institutional positioning and prestige), the capability to change, the capacity to learn from itself and from the environment, and the resilience and the capability to adapt.

Appendix 8: Quotes Related to the Content of Change

TAPE RECORDINGS FROM THE INTERVIEWS

RELEVANT QUOTES RELATED TO THE CONTENT OF CHANGE

ASPECTS	PROBES	UNIVERSITY/TAP E RECORDING	QUOTE
Concept of Credit Frameworks	Quantitative/tool	University A-Tape Recording No. 2-Academic Provost	<i>"We developed some guides for professors and students...to make people understand that we were valuing time...we also were making tools...as a way to plan student time in the logic of academic credits"</i>
		University A- Tape Recording No. 4-Planning Manager and Quality Assurance Manager	<i>"The university in the discourse of academic credits...(it) is a tool for the curriculum which started in 2002..."</i>
		University C- Tape Recording No. 3-Dean	<i>"We started to understand credits...as 48 hours or weekly work, and based on that we developed our curriculum in all the programmes, understanding that a student must not have more than 1 academic credit a week...this design...(implies that the programme) cannot have more than 21 credits per semester".</i>
		University C- Tape Recording No. 4 Planning Director	<i>"I conceive the credit system as a simple and powerful tool, which allows infinite possibilities to develop a process of education, recognition, and homologation among universities..."</i>
	Regulatory concept	University A, Tape Recording No. 8 Professors	<i>"Academic credits correspond to some paradigms the Ministry of Education designed some time ago...with the purpose of enabling measurement of higher education at the undergraduate level...it was implemented following a law..."</i>
		University A, Tape Recording No. 5 Director of Admissions, Registrar and Control	<i>"We consolidated the concept of credits working based on the rules by the Ministry of Education..."</i>
	Related to curriculum issues and social relevance	University B, Tape Recording No. 12 Professors	<i>"The system of credits allows an important change, because behind the logic of flexibility it is helping us to see that pedagogy is an important topic"</i>
		University B, Tape Recording No. Quality Assurance Manager	<i>"The Curricular Reform in the case of academic credits has defined, what is a credit?, why credits? how to offer a subject with credits? And which methodology is needed to teach?"</i>
		University B, Tape Recording No. 7, Planning Director	<i>"The system of credits was thought of as a mechanism of curriculum management, which enables the design of the curriculum to be based on learning outcomes, and the ability to organize academic activities in</i>

			<i>relation to those outcomes.”</i>
	Related to quality	University B, Tape Recording No. 7, Planning Director	<i>“The system of credits has transformed academic structures...it is one of the big changes in the mission orientation of the university...the transformation has helped to change the university from a teaching oriented university to a research and teaching oriented university.”</i>
Purposes of credit frameworks	Curriculum transformation	University B, Tape Recording No. 12 Professors.	<i>“The credit system had very clear intentions...it expected an institutionalisation of the curriculum management, being able to repeat that process at the academic unit level.”</i>
		University B, Tape Recording No. 12 Professors	<i>“The credit system allows more interdisciplinary programs, more students and it gives flexibility to students”</i>
	Flexibility	University C, Tape Recording No. 4, Planning Director	<i>“I think the university is starting to understand how academic credits work. Flexibility does not work as it should. I think there more flexibility is needed, and this means offering more double degree alternatives in a simpler way, which today is almost impossible.”</i>
		University B, Tape Recording No. 4, Deputy Director of Finance	<i>“The university decides, after a process of planning...abandon an inflexible structure academically and curricular, and implemented a flexible structure, able to bring the students exchanges with national and international universities”</i>
	Mobility	University A, Tape Recording No. 1, Rector	<i>“In 2002 with the accreditation of certain programs of the University it was seen that if we were not able to implement academic credits, it could be impossible to compare and share our education with foreign universities and implement international mobility”</i>
		University C- Tape Recording No. 4 Planning Director	<i>“I conceive the credit system as a simple and powerful tool, which allows infinite possibilities to develop a process of education, recognition, and homologation among universities...”</i>
		University B, Tape Recording No. 4, Deputy Director of Finance	<i>“The university decides, after a process of planning...abandon an inflexible structure academically and curricular, and implemented a flexible structure, able to bring the students exchanges with national and international universities”</i>
	Double degree	University A, Tape Recording No. 5 Director of Admissions, Registrar and Control	<i>“Within the regulations of the university, the possibility of double degrees has been considered. The regulations define the minimum academic results expected in order to allow double degrees, but up to</i>

			<i>now, it is only in the regulations. It does not work."</i>
	Quality assurance	University A, Tape Recording No. 4, Planning Manager and Quality Assurance Manager	<i>"Academic credits have been accepted by members of the academic community as a pre-condition in obtaining accreditation and quality recognition."</i>
		University B, Tape Recording No. 7, Planning Director	<i>"The system of credits was thought of as a mechanism which permitted quality in curriculum management."</i>
Change and credit frameworks		University B, Tape Recording No. 12, Professors	<i>"I have taken part in the implementation of credit systems and I think in these years there has been a collective learning process, not only of professors, but also for staff and directors."</i>

Appendix 9: Quotes Related to the Context of Change

TAPE RECORDINGS FROM THE INTERVIEWS

RELEVANT QUOTES RELATED TO THE CONTEXT OF CHANGE

ASPECTS	PROBES	UNIVERSITY/T APE RECORDING	QUOTE
Trends in the process of change in higher education	Globalisation/ Internationalisation	University A, Tape Recording No. 3, Dean	<i>“Dealing with the methodology about the curriculum revision, we started studying local, national and international benchmarks...that study had to be in Europe, Central America, North America and South America”</i>
		University A, Tape Recording No. 2, Academic Provost	<i>“Thanks to credit frameworks, we started to talk about how academic credits were in the USA and we started to compare our institution and quantify our programs and started thinking about academic differences.”</i>
		University A, Tape Recording No. 1, Rector	<i>“The determinants of the process of change were external. We started to see that if we were not able to take part in the quality accreditation process we were going to fall behind...(regarding credit frameworks) the first steps were timid, but the quality accreditation process showed us that if we were not able to go deeper with it, we would not be able to compare our programs with the world and with international universities and promote mobility in a proper way.”</i>
	Massification – Growth- Access	University A, Tape Recording No. 1, Rector	<i>“The University has grown from a population of 5.000 students in year 1997 to a population of 10.000 students today...based on this change we started to see troubles on many things”.</i>
		University B, Tape Recording No. 4, Deputy Director of Finance	<i>“University B has changed from a small and closed university to a large, open, and diversified university (in terms of its programs), which has invested in research and social activities in order to transcend into the future”.</i>
	Quality assurance /social relevance	University A, Tape Recording No. 8, Professors	<i>“Concerning the motivation (about the implementation of credit frameworks), it has been just legal...the legal motivation has been very strong, especially about qualified registry of programs and accreditation.”</i>
		University A, Tape Recording No. 3, Dean	<i>“In the past, the university internally was developing its curriculum in a very traditional way...when the rules, regulations, and norms appeared and when the university faced quality assurance models and quality accreditation, new policies appeared regarding teaching, research, and social</i>

			<i>issues...we also started to talk about institutionalisation and institutional policies."</i>
		University A, Tape Recording No. 2, Academic Provost	"University A started to discuss academic credits to obtain quality demands...based on this the university then started to discuss new and institutional curriculum policies"
		University A, Tape Recording No. 1, Rector	<i>"The determinants of the process of change were external. We started to see that if we were not able to take part in the quality accreditation process we were going to fall behind...(about credit frameworks) the first steps were timid, but the quality accreditation process showed us that if we were not able to go deeper on it, we would not be able to compare our programs with the world and with international universities and promote mobility in a proper way"</i>
		University B, Tape Recording No. 9 Quality Assurance Manager	<i>"When I see the main determinants of change at the university, in chronological order, the first change was the Professors' policy building a real academic community...then we started a curricular reform (including the introduction of credit frameworks)."</i>
		University B, Tape Recording No. 9, Quality Assurance Manager	"Quality culture is something which started in the 90s, as an institutional concern. Step by step it grows and in year 2000 the university becomes part of the institutional accredited universities in Colombia being part of a selected group of 12 institutions"
		University B, Tape Recording No. 1, Rector	<i>"The university did an important change building a credit framework, even doing it before the norms and laws demanded. If we wanted to have a quality project of education, we needed to have the best curricula, but to have that, we also needed the best professors, and in order to do so, we needed a new Professors' institutional policy."</i>
		University C, Tape Recording No. 9, Professors	<i>"There is an important determinant of change. This was the first public university involved in quality accreditation in Colombia... this issue has pushed the modernization of academic programs and the institutional change."</i>
	Curriculum transformations	University A, Tape Recording No. 2, Academic Provost	<i>"We started to reflect on our undergraduate programs...what the society expected from them. This discussion was translated into important aspects like debates about competencies, credit frameworks...based on this we have created boundaries around the content of the undergraduate programs and</i>

			<i>we have linked postgraduate and undergraduate programs.”</i>
		University B, Tape Recording No. 9, Quality Assurance Manager	<i>“We also initiated a project of curriculum reform...to build a curriculum process which changed the university. The university now talks about the curriculum and there is growing interest, and the culture is such that it wants to involve different people from the academic community in discussions on curriculum issues.”</i>
	Knowledge society	University B, Tape Recording No. 9, Quality Assurance Manager	<i>“The other element which started in 1999 was moving from a teaching centred university to a teaching university which also does research...that helped the university to bring expert researchers, built groups of research and has allowed the institution to be part of the best 10 universities in Colombia in research.”</i>
		University C, Tape Recording No. 3, Dean	<i>“Since some years ago we are fundamentally a postgraduate university. We have more postgraduate programs than undergraduate programs...we have evolved strongly because we understand postgraduate development as a way to cross the knowledge frontier.”</i>
Institutional culture/ethos/history and change	Dimensions of Institutional culture such as: leadership, role of authority, ways of working together, ways of governance, ways of communication, conflict resolution, values	University C, Tape Recording No. 8, Human Resource Manager	<i>“Every day the university is different. There is always something new to work on, and all this happens due to a Rector with a great management ability and leadership in the process of change.”</i>
		University A, Tape Recording No. 8, Professors	<i>“The introduction of credit frameworks at the Faculty of Engineering...was a challenge to the program. It was possible through teamwork. All the professors met and together we were able to identify core contents, and based on this, the rest of the contents of the program.”</i>
		University A, Tape Recording No. 8, Professors	<i>“The Credit Framework is something that appeared from one time to another...Definitely this is a cultural change which is related to the administration, the leaders, professors and students. Cultural changes are not easy, they are complex, and while you find positive things you also find negative ones....This new culture (at the faculty of engineering) has implied that we are not anymore an island. We belong to an academic community”</i>

		University A, Tape Recording No. 3, Dean	<i>“Before (the implementation of credit frameworks) the university talked about action plans, not about development plans, and before it did not have the means to assess and evaluate the plan...now we have worked on a development plan and its accountability.”</i>
		University A, Tape Recording No. 5, Director of Admissions, Registrar and Control	<i>“In the university we managed everything independently and separately. There was no integration among informatics, control, and academic registry and the administration...all were working separately and the faculties too”.</i>
		University C, Tape Recording No. 1, Rector	<i>“The first changes in the university management (due to academic flexibility) are changes in academic decision making, institutional analysis, prioritization, and adjustment to the velocity of changes...we started to formulate a 10-year development plan.”</i>
Change at universities and the credit frameworks	Causes: ¿Resource driven or institutional explanations?	University B, Tape Recording No. 4, Deputy Director of Finance	<i>“Over time and with the implementation of these projects (credit frameworks among others), administratively it was necessary to have an equilibrium between academics, finance (funding), and the administration...all of these had to grow in equilibrium.”</i>
		University B, Tape Recording No. 5, Dean	<i>“I think University B, due its historical importance, thought that tradition and fame was enough...today, university B found that it needed to change, and that history was not enough to deal with the changes of higher education in Colombia and the world...to face the new scenario of competition..”</i>
		University B, Tape Recording No. 2, Vice Rector	<i>“The most important change has to be the professionalization of university management, with a more articulated, reflective, less reactive, more prospective, and more visionary view of the institution...(in order to) to have a more contemporary reading of the knowledge society and a more visionary understanding of the university.”</i>
		University B, Tape Recording No. 9, Quality Assurance Manager	<i>“If we compare university B at the nineties and now, university has done a 180 degrees change, being a university more competitive and open to its environment”</i>
		University C, Tape Recording No. 1, Rector	<i>“The main reason for change at University C was the (institutional) crisis due to promises not fulfilled...this problem yielded governance difficulties...with a great</i>

			<i>economic concern.”</i>
	Consequences	University A, Tape Recording No. 4, Planning Manager and Quality Assurance Manager	<i>“The credit frameworks have introduced interesting cultural changes. The university had a decentralised government but where budgets were at the central level...in this moment, it is changing to more autonomy being given to deans in order to manage their budgets and expenses.”</i>
		University B, Tape Recording No. 12, Professors	<i>“The culture of credit frameworks has allowed the institution to maintain a close relationship with the students...a more personalised education.”</i>
		University B, Tape Recording No. 9, Quality Assurance Manager	<i>“The introduction of credit frameworks has changed the relationship among the university, the curriculum, and its students...the student identity with the group is not possible anymore.”</i>
		University B, Tape Recording No. 5, Dean	<i>“The university has abandoned the idea of being paternalistic with the students. Now (with the introduction of credit frameworks) it confronts them.”</i>

Appendix 10: Quotes Related to the Process of Change

TAPE RECORDINGS FROM THE INTERVIEWS

RELEVANT QUOTES RELATED TO THE PROCESS OF CHANGE

ASPECTS	PROBES	UNIVERSITY/T APE RECORDING	QUOTE
Credit Frameworks and Management	Governance and Structure	University A, Tape Recording No. 3, Dean	<i>“(With the introduction of credit frameworks), there is a different view of the university management...now the university has started to discuss efficiency in the use of the infrastructure (buildings), the optimal population of students, growth, and spaces for the community.”</i>
		University A, Tape Recording No. 5, Director of Admissions, Registry and Control	<i>“The university today is in the implementation of its development plan. It is seriously considering the construction of a new building due to the fact that credit frameworks implied a new way to deal with groups of classes. The way we managed this historically is not useful anymore.”</i>
		University A, Tape Recording No. 5, Director of Admissions, Registry and Control	<i>“Regarding institutional coordination procedures, we now have an organization and methods unit which guarantees we have standardized procedures and unified criteria as a consequence of credit frameworks implementation.”</i>
		University A, Tape Recording No. 2, Academic Provost	<i>“We have ended up at a very interesting point at the university. We have unified the faculty of engineering. Before (the implementation of credit frameworks) we had four faculties of engineering according to different programs (civil, industrial, mechanical, etc...). Now we only have one structural Faculty of Engineering that includes many engineering programs. The Faculty of Engineering has gone one step further with the introduction of credit frameworks.”</i>
		University A, Tape Recording No. 4, Planning Manager and Quality Assurance Manager.	<i>“The concept of academic credit frameworks has changed our culture interestingly. The university used to have a centralised government where budgets of income and expenses were at the central level.... now we have evolved to give more autonomy to deans, giving them the possibility to control their budgets”.</i>
		University B, Tape Recording No. 4, Deputy Director of Finance	<i>“(with the implementation of academic credits)..University B transits from a small and closed university to a bigger and open university...In the past the budget was done centrally...now it is necessary to decentralise this process and involve the different units</i>

			and departments. In consequence now it is needed more time to do it”.
		University B, Tape Recording No. 10, Registrar	“We are coming from rigid and centralised curricula which were autonomously managed by the faculties. Now the curricula have an institutionally centralised management with an institutional academic timetable”
		University B, Tape Recording No. 10, Registrar	<i>“A notable change has been the new organisational structure when implementing credit frameworks...we created an office in charge of academic coordination which is the new registrar office...all of this is under the management of the Academic Planning Department...The Provost, the Academic Planning Department, and the Registrar Office saw the need to create committees in which all the adjustments were done. Right now, an Academic Credits Committee is being created. It orients others to the curricula policy and the way to transform programs.... In addition, now each Faculty has internal curriculum committees...there were also changes in the financial and administrative structure of the university because (for example) we now need to budget income from fees according to academic credits taken.”</i>
		University C, Tape Recording No. 5, Dean	<i>“(Credit framework implementation) has been a trigger of a new need to build and document processes and procedures and this is the reason for the introduction of the integral management system of information.”</i>
		University C, Tape Recording No. 1, Rector	<i>“We have re-centralised many things at the university (according to the introduction of curriculum flexibility)...I have centralised the university in the sense that faculties do not decide everything independently.”</i>
	Culture, values and identity	University C, Tape Recording No. 4, Planning Director	<i>“In terms of my role (due to credit frameworks), gradually administrative & financial issues are becoming more related to academic issues. This has helped the fact that the university does not always give importance to university management, and also the way that academic change positively or negatively affects the university financial and administrative status...this has led to an interesting transformation...during the last five years we have also been talking about an institution in which there is an intentional and visible model oriented to serve users (students).”</i>
		University C, Tape Recording	<i>“Our university has learned a lot about planning and tactics. Now we have more</i>

		No. 4, Planning Director	<i>precision in our use of resources, the destination of resources, and how resources affect financial statements.”</i>
		University B, Tape Recording No. 4, Deputy Director of Finance	<i>“...these confirmed something that was not easy. It was the understanding (of relationships) among academia, administration, and financial issues at the university. This obliged the university to create new units in each faculty able to interpret the relationships between academia and the administration...this has happened during the last 12 years and has been one of the successful key factors in attaining our goals.”</i>
		University B, Tape Recording No. 10, Director of Registrar	<i>“Internally at the faculty level, the topic of negotiations appeared. Each faculty decides what to offer based on their accumulated knowledge, how to offer that knowledge or programs to other faculties, and what to demand from other faculties. It starts a negotiation process among faculties and it changes the traditional autarkic mentality...now faculties think about what to offer, what to demand in terms of subjects, and academic credits.”</i>
		University A, Tape Recording No. 8, Professors	<i>“The change to credit frameworks was a challenge and it was possible due to team work. Professors from different faculties worked together in many ways...we did not work as isolated islands...we built a culture in which we were all involved and we all knew about the credit framework.”</i>
		University B, Tape Recording No 2. Vice-Rector	<i>“Following the curriculum changes, we developed new institutional norms. First, the undergraduate student regulations...then the postgraduate student regulations.”</i>
		University B, Tape Recording No. 1, Rector	<i>“There has been a strong cultural change about what the university desires and its vision. Before, there were no dialogues among schools and departments. The credit framework has allowed dialogues among the different schools and departments and more students and professor mobility among them.”</i>
	Management practices and techniques	University A, Tape Recording No. 8, Professors	<i>“One of the most important changes has to do with the professors’ management policy, especially how to measure professors’ activity in terms of student academic credits...this is important because (with the introduction of credit frameworks), the professors’ work grows and more personalised attention to students is needed. The way of hiring and professors and contract management has also changed.”</i>

		University A, Tape Recording No. 3, Dean	“(the introduction of credit frameworks) has led to redefine the budget management...the university with the implementation of credit frameworks strengthened the tutoring system...able to guide the student personally and academically”
		University A, Tape Recording No. 5, Director of Admissions, Registry and Control	<i>“The university was using an information system with which it managed the relationship between the student and the university...today we use a different platform which also allows also the use of our web page. The student community, with this new system, can consult and manage their academic experience.”</i>
		University A, Tape Recording No. 2, Academic Provost	“With the introduction of credit frameworks we have reduced professors...because we rationalise the academic activity of each professor”.
		University A, Tape Recording No. 7, Marketing and Communication Coordinator	<i>“Actually the credit framework has many implications in terms of the marketing strategy. We try to mention it in the tactics we use with the marketing strategy...we always mention internal student mobility (within academic programs) which is something very interesting for the students.”</i>
		University B, Tape Recording No. 4, Deputy Director of Finance	<i>“The financial information system was the last part implemented (with the introduction of credit frameworks). At that moment, we found the need for a system able to give financial details at the academic and administrative unit level, to manage different cost centres, to compensate costs between units...the most difficult issue has been the human resource cost management which has been very centralised...the credit system yielded an important challenge in terms of defining a value for each subject not only in academic terms but also in financial terms. It presents the question of how to tariff each credit and associate it with the fees...we decided to tariff using a range of academic credits.”</i>
		University B, Tape Recording No. 6, Director of Registrar Academic	<i>“When building academic frameworks we started to offer new things. We started internal double degrees...having the possibility to mix students from different programs and departments...we could also mix undergraduate students with postgraduate students...It gave birth to new programs such as ‘coterminales’ which is the possibility to link postgraduate with undergraduate programs.”</i>
		University B,	“When we talk about flexible curricula which

		Tape Recording No. 11, Director of Marketing Department	allow programs to be offered in academic credits, these imply new possibilities. It implies double degrees, academic mobility, exchanges and other alternatives which make institutions more attractive to potential students”.
		University C, Tape Recording No. 4, Planning Director	<i>“We are still not attaining certain goals in terms of academic flexibility for the students including student mobility...in terms of management, we have developed an integral management system...we have also implemented an information system which integrates matters such as financial issues, human resource management, and curriculum management...however with this new curriculum, policies costs have grown...we are starting to understand why.”</i>
		University C, Tape Recording No. 9, Professors	<i>“Credit systems facilitate the creation of new academic programs... for example I created a new master’s degree in just three months alone...building it was very simple.”</i>
	Adaptability and resilience	University C, Tape Recording No. 8, Human Resource Manager	“I have the satisfaction to say that every day the university is different; there is always something new to work on”.
		University C, Tape Recording No. 4, Planning Director	<i>“Regarding ability to adapt and resilience, we are still far away. We are not close to having satisfactory change capacities and future awareness. We are still slow to respond to the environmental change. We are still missing this.”</i>
		University B, Tape Recording No. 12, Professors	<i>“This credit framework implementation has made us more creative in solving problems when they appear. We now have to have solution plans B or C in advance in order to solve problems that appear.”</i>
		University A, Tape Recording No. 2, Academic Provost	<i>“Thanks to credit frameworks, we started to do benchmarking in the USA and we started to compare and quantify our programs with other programs from around the world...we also compare our institution with other universities in Colombia. We followed the Universidad Javeriana experience closely.”</i>
Micro analysis and micro politics of the process of change in the implementation of credit frameworks	Actors	University A, Tape Recording No. 3, Dean	(Talking about key actors in the implementation of credit frameworks) <i>“The engineering department is more open to change, more ambitious, although when we talked about change many thought they would fail.”</i>
		University A,	<i>“Something which has been difficult with the</i>

		Tape Recording No. 8, Professors	<i>implementation of credit frameworks is the acknowledgement of students' learning hours outside their class...this is especially difficult with students studying at night. They really do not follow the expected time of active learning we need according to the credit framework.... Students studying at night try to take as many academic credits as possible to optimize their fees paid, without taking into consideration the active learning needed in each subject."</i>
		University A, Tape Recording No. 2, Academic Provost	<i>"In terms of adaptability (with the implementation of credit frameworks) we have enough adaptability, but it depends on the discipline. The Engineering department is the paradise for the institution because of the engineers' vision. It is different in the law department, which is more difficult to convince and commit to this process of change."</i>
		University A, Tape Recording No. 1, Rector	<i>"One of the key issues (in the implementation of credit frameworks) is that it has been impossible to implement that change just with the people from inside. We have had to bring people from outside to make things happen, having a cultural change...the credit framework has allowed a dialogue among different academic entities within the university. We have had more internal mobility..."</i>
		University B, Tape Recording No. 12, Professors	<i>I had the chance to be involved in the implementation of credit frameworks and the faculty of law...initially it faced a reaction against the model by professors, but the system was very attractive for the students.... a strong leadership by the Deanship was very important in order to consolidate the system. This has built stronger team work."</i>
		University B, Tape Recording No. 12, Professors	<i>"I also took part in the change (implementation of credit frameworks) and I think a significant aspect is directive leadership...also at the cultural level we moved to students being more concerned about self-learning processes...the initial professors' resistance was to the idea of changing pedagogy."</i>
		University B, Tape Recording No. 12, Professors	<i>"About the traditional disciplines open to this change (introduction of credit frameworks), I have seen that disciplines whose purpose of study is related to human learning, usually show proclivity to that change. However, disciplines closer to professional activity (such as Medicine) tend</i>

			<i>to be less in favour of that change."</i>
		University C, Tape Recording No. 3, Dean	"We can say that Medicine has been a trigger of change at the university (implementing curriculum flexibility and academic credits)...At least is the Faculty of Medicine which has made the bigger questions about methodology of learning, virtual learning, etc.)
	Attitudes towards change	University A, Tape Recording No. 9, Students	<i>"Even through difficulties, if we were to choose between a rigid or a flexible model of the curriculum, we would choose and pick a flexible regime (with credit frameworks)."</i>
		University A, Tape Recording No. 8, Professors	<i>"This model (credit framework) has been more complex for students at advanced semesters, which were used to the rigid culture of the curriculum...students from lower semesters are different and they are getting used to the new framework...With the professors, we also had troubles because those with many years of experience teaching a subject reacted against the framework...They (professors) were trying to abort the credit system, there was no awareness of it, they said there would not be enough time to teach and that the system was too difficult."</i>
		University A, Tape Recording No. 8, Professors	<i>"What we found is that those who had experience (with the credit framework) from the beginning of their studies understood and integrated quickly with the system. In the case of old students not familiar with the system, they did not like the framework ...this lead to a process of change with levels of resistance according to the operative or strategic level in which the professor or student was taking part. At the central level the change was clear, conceptualisation was transparent and the more down you go to professors and students, the higher level of resistance."</i>
		University A, Tape Recording No. 3, Dean	<i>"In this moment (while facing budget problems with the implementation of credit frameworks), some people is trying to go back and retrocede in the implementation of credit frameworks because people have fears...(also) some faculties are making noise about keeping the old curricula system."</i>
		University A, Tape Recording No. 3, Dean	<i>"For the people it was not easy, they were used to doing what they wanted...there were new deans and old deans...old deans seemed to not know the process (of implementing credit frameworks). They were always</i>

			<i>refuting and asking about where the model came from."</i>
		University B, Tape Recording No. 12, Professors	<i>"I had the chance to be involved in the implementation of credit frameworks and the faculty of law...initially it had a reaction against the model by professors, but the system was very attractive for the students.... a strong leadership by the Deanship was very important to consolidating the system. This has built stronger team work."</i>
		University B, Tape Recording No. 12, Professors	<i>"The impression that I have (with the implementation of credit frameworks) over the last 10 years, is that the faculties have been feuding more and are mostly interested only in accommodating themselves. I felt more flexibility 5 or 6 years ago than today...that flexibility is now more diffuse...today the interdisciplinary work is very difficult and there is change resistance."</i>
		University B, Tape Recording No. 12, Professors	<i>"Regarding attitudes towards the implementation of credit frameworks...something fundamental has been the development courses for professors, which allow them to discuss the process institutionally, sharing experiences and dialoguing about them."</i>
		University C, Tape Recording No. 3, Dean	<i>"The implementation of academic credits has been very confrontational. Every professor pretends that his/her subject must have more academic credits."</i>
		University C, Tape Recording No. 9, Professors	<i>"Talking about how deep the process of implementing credit frameworks is...For me it is not an institutional problem is a professors problem...we do not adequately use the concept of credit frameworks."</i>

Appendix 11: Documentary Data from the Cases Studied

University A

- University A- Institutional Norms and Regulations 1993
- Educational Institutional Project- Action Plan 2006-2010
- Policies of University A- WEB Presentation 2010
- Self-Evaluation Report for Accreditation- Systems Engineering 2008
- Institutional Curriculum 2005
- Rules and Directives for revision, adjustment and projection of undergraduate and postgraduate programs 2007
- Academic and Curricular orientations: The student in the Credit Framework model 2007
- Organizational Structure 2010
- Students regulations 2007
- Professors regulations 2007
- University statistics 2010
- Competencies in the educational context of University A 2007
- Subject information system for the undergraduate and postgraduate programs 2010
- Subject catalogue of University A 2009
- Institutional program on tutoring 2009 and 2011
- The system of academic credits- Antecedents and projections 2011
- The Professor and the credit framework model 2007
- Institutional instrument to design subjects 2011
- Institutional teaching evaluation system 2011

University B

- Institutional Mission and Vision 2004-2015
- Integral Plan of Development 2004-2019
- Integral Strategic Plan 2004-2015
- Institutional Educational Project 2009
- Synthesis of the Self-Evaluation Report for Institutional Accreditation 2010
- Guidelines for the Curricular Management 2004
- Institutional Report on the Strategic Plan 2009
- Institutional Report on the Strategic Plan 2008
- Institutional Report on the Strategic Plan 2007
- Statistics Bulletin 2009
- Other institutional information of University B 2008
- Postgraduate Students Regulation 2007
- Undergraduate Students Regulation 2007

University C

- Institutional Educational Project 2010
- About the Future: Institutional Educational Project 1996-2010
- Development Plan- 2009-2018
- Institutional Action Plan 2010
- Curricular Reform- 2002
- Agreement 29 Academic Council – Institutional Curricular Policy 2008
- Pillars for and agreement about University Plan 2009-2018
- Agreement 03- Superior Council- About Curriculum Committees 2006
- Self-Evaluation Report – Faculty of Medicine 2006
- Agreement 06- Superior Council- Student Regulations 2007
- Institutional Self Evaluation Report – 2011
- Assessment on the Development Plan 2003-2007
- Synthesis of the Assessment on the Development Plan 2003-2007

- Agreement 21- Superior Council- Professors Regulation 2002
- Curriculum Model Law Program- 2010

**Appendix 12: Relevant moments in the implementation of Credit Frameworks –
University A**

YEAR	RELEVANT MOMENT
1998	The Faculty of Engineering starts a discussion about credit frameworks and accreditation
1999	The Central Committee for Accreditation was created
2002	A new regulation for professors and academic community was issued
2003	The CNA (National Accreditation Council) does a preliminary visit to the University to open a process of quality assurance in the institution.
2004	A new policy on student tutoring was established in the university
2005	The university developed formally an important number of internal and external workshops on flexibility and credit frameworks. The Academic Pro-Vost preparation for a curricular change developed these workshops.
2006	The Action Plan for 2006-2009 was approved and within it a new policy on curriculum flexibility (which includes the credit framework policy)
2007	New policies approved on student regulations, and rules and norms for the revision of undergraduate and postgraduate programs. The credit framework was theoretically implemented in the University.
2009	All the academic programs were modified according to the new curricular policy. The University also created an institutional catalogue with all the subjects and programs
2010	A Learning Management System (Called AWA) was implemented in the University in order to appropriately implement the credit framework
2010	An Institutional Research was done on the implementation of credit frameworks
2011	Initial formulation of the developing plan for the University A, 2010-2019.

Source: The author, based on Documents analysed, Observational data and Interviews

Appendix 13: Purposes and Understanding of Credit Frameworks by each Actor at University A

ACTOR	UNDERSTANDING OR PURPOSES OF ACADEMIC FRAMEWORKS
Official documents including Educational Project	-Flexibility: To allow different student interests -Mobility -Openness: Capacity to interact with other programmes from other universities
Rector	-Quality assurance tool
Academic Provost	-Mobility -Response to legal requirements on quality assurance. -Mean to promote institutional change
Dean	-Response to legal requirements on quality assurance
Planning Manager and Quality Assurance Manager	-Response to legal requirements on quality assurance -An unknown issue for students and professors
Director of Admissions, Registrar and Control	-Internal issue with no competitive impact -Response to legal requirements
Marketing and Communication Coordinator	-Internal mobility
Professors	-Internal mobility -Response to legal requirements on quality assurance
Students	-Low development in the possibility to allow internal mobility.

Source: The author, based on documents, observational data, and interviews

Appendix 14: Main Determinants in the Implementation of Credit Frameworks at University A

ACTOR	MAIN DETERMINANTS IN THE IMPLEMENTATION OF CREDIT FRAMEWORKS
Rector	<ul style="list-style-type: none"> - Accreditation of high quality - Student Mobility
Academic Provost	<ul style="list-style-type: none"> - Regulatory pressures and derived from them quality assurance issues - Need for academic transformation after a very traditional model
Dean	<ul style="list-style-type: none"> - Regulatory pressures and derived from them quality assurance issues
Planning Manager and Quality Assurance Manager	<ul style="list-style-type: none"> - Student Mobility - Need to change from a very traditional institution
Director of Admissions, Registrar and Control	<ul style="list-style-type: none"> - Operative Efficiency needed
Marketing and Communication Coordinator	<ul style="list-style-type: none"> - Student Mobility
Professors	<ul style="list-style-type: none"> - Student Mobility - Regulatory pressures and derived from them quality assurance issues

Source: The author, based on observational data and interviews

Appendix 15: Identification of a Past and a Present in the Particular Micro Context of University A

ISSUE TO BE COMPARED	PAST	PRESENT
Managerial Model	Poor integration and articulation among departments and faculties	More Centralised policies and more concern about teamwork
	Low or no interest in accountability	More control and accountability at all levels.
	Untidiness and administrative disorder	More Institutionalization of policies and processes.
Cultural issues	Very traditional, internally oriented and “old cultural model” (with Deans and Professors of more than 30 years)	More Competitive and open culture (Ej. Benchmark oriented, use of external advisors)
	“Presidential” management- “One man leadership”	In the process of Building an administrative and academic managerial team
	Antagonism towards change	Interest and promotion of change
	Leading with a “top down” approach	Leadership combining “top-down” and “bottom up” approaches

Source: The author, based on Observational data, and Interview

Appendix 16: Main Impact of Credit Frameworks Implementation on the University Management: The Case of University A

MAIN IMPACTS ON UNIVERSITY MANAGEMENT	ACTORS IDENTIFYING THOSE IMPACTS
Cultural Change (looking for an efficiency oriented model)	Rector, Academic Provost, Professors, Director of Admissions, Registrar and Control
More institutionalisation and integration among the community	Rector, Academic Provost, Dean, Professors, Director of Admissions, Registrar and Control
New needs and way to manage the infrastructure	Academic Provost, Dean, Director of Admissions, Registrar and Control.
New information systems (in the learning, operational and financial process)	Rector, Academic Provost, Dean, Director of Admissions, Registrar and Control, Planning Manager and Quality Assurance Manager, Professors, Students
New academic practices and services (including a new tutoring program, changes in the process of academic hiring and contracting, training programs and the subject catalogue)	Rector, Academic Provost, Dean, Director of Admissions, Registrar and Control.

Source: The author, based on documents, observational data and interviews

Appendix 17: Type of Role in the Implementation of Credit Frameworks at University A

ACTOR	ROLE PLAYED IN THE IMPLEMENTATION OF CREDIT FRAMEWORKS
RECTOR	Enthusiast and Pragmatic
ACADEMIC PROVOST	Enthusiast
DIRECTOR OF ADMISSIONS, REGISTRAR AND CONTROL	Enthusiast and Pragmatic
DEANS	Sceptics
PLANNING MANAGER AND QUALITY ASSURANCE MANAGER	Sceptic and Pragmatic
PROFESSORS	Sceptics and Antagonists
MARKETING AND COMMUNICATION COORDINATOR	Sceptic
STUDENTS	Sceptics

Source: The author, based on Documents, observational data and interviews and theoretically based on the model of Allen and Layer (1995) about diverse actors' reactions in favour of and against the introduction of credit frameworks. This model was explained in Chapter 3 of this research in the part on "*Institutional Actors and unintended consequences in university management*".

**Appendix 18: Relevant Moments in the Implementation of Credit Frameworks –
University B**

YEAR	RELEVANT MOMENT
1988-1999	Change from a Teaching University to a Teaching University that does research (with consequences in the improvement of research and in the quality and quantity of the academic community)
1994	Initial discussions about the Institutional Strategic Plan
1997	Adoption of the Credit Framework
1998	National Regulation (norm) on Credit Frameworks for the Higher Education System
1998-2002	Launching and implementation of the “Credit Frameworks Overseer Committee”
1998-2003	Institutional Strategic Plan
1999-2002	First Curricular Reform
2000	Most important program accreditations on high quality at University B
2002	New Information System to administer the Credit Framework
2003	Launching of the “Institutional Credit Frameworks Committee” that replaces the former “Credit Frameworks Overseer Committee”
2003-2004	Institutional Process of evaluation and assessment of the institutional and program curricula
2004	Launching of the New Institutional Regulation on Curricular Management
2005	Institutional accreditation on high quality
2005	New Curricula established in the whole group of undergraduate programmes.
2004- 2019	Second Institutional Strategic Plan
2006	Institutional Evaluation done by the European University Association EUA
2006	Launching of the programme on ISO Certification of Quality.
2007	New postgraduate students regulation
2008	First use of the AUIP (Iberoamerican Postgraduate Association of Universities) model of quality assurance for postgraduate programmes.
2011	Institutional reaccreditation of high quality
2011	New pedagogical reform oriented to the establishment of learning outcomes
2012	Creation of the Centre for Teaching and Learning

Source: The author, based on Documents, Observational data, Interviews and Restrepo (2008).

Appendix 19: Purposes and Understanding of Credit Frameworks by each Actor at University B

ACTOR	UNDERSTANDING OR PURPOSES OF ACADEMIC FRAMEWORKS
Rector	<ul style="list-style-type: none"> - Key determinant in the Curricular Reform - Internationalisation - Quality assurance (promoting flexibility and curricular transformation) - To attain relevance
Vice Rector	<ul style="list-style-type: none"> - Key determinant in the Curricular Reform - Academic Flexibility - To attain relevance
Vice President of Finance	- To attain relevance
Dean	<ul style="list-style-type: none"> - Key determinant in the Curricular Reform - Academic flexibility (including program integration between undergraduate and postgraduate programmes)
Planning Director	<ul style="list-style-type: none"> - Key determinant in the Curricular Reform - Quality Assurance
Quality Assurance Manager	<ul style="list-style-type: none"> - Key determinant in the Curricular Reform - Quality Assurance
Director of Marketing Department	- Academic Flexibility
Deputy Director of Finance	<ul style="list-style-type: none"> - Academic Flexibility - To attain relevance - Quality assurance
Registrar	<ul style="list-style-type: none"> - Academic Flexibility - Internationalisation
Professors	<ul style="list-style-type: none"> - Response to national regulations - Academic Flexibility (including changes about the learning process and interdisciplinarity) - Internationalisation (including mobility)
Students	<ul style="list-style-type: none"> - Academic Flexibility (including electives, double degrees and timetable administration) - Internationalisation (including student mobility)

Source: The author, based on Institutional documents analysed, observational data and interviews

Appendix 20: Main Determinants and Main Actors in the Implementation of Credit Frameworks at University B

ACTOR	MAIN DETERMINANTS IN THE IMPLEMENTATION OF CREDIT FRAMEWORKS
Rector	<ul style="list-style-type: none"> - Competitiveness - Quality assurance (including due to this the implementation of a Curricular Reform). - Internationalisation
Vice Rector	<ul style="list-style-type: none"> - Competitiveness (including more academic professionalization, accountability and emphasis on research as drivers to be competitive)
Vice President of Finance	<ul style="list-style-type: none"> - Competitiveness
Dean	<ul style="list-style-type: none"> - Competitiveness (Including the emphasis on research, the strengthening of the academic community and growth as the key drivers to be competitive)
Planning Director	<ul style="list-style-type: none"> - Quality assurance (including as drivers the strengthening of the academic community and the research orientation) - Internationalisation
Quality Assurance Manager	<ul style="list-style-type: none"> - Quality assurance - Competitiveness (including the academic strengthening, financial distress and the curricular reform as the main drivers)
Director of Marketing Department	<ul style="list-style-type: none"> - NOT CLEAR ABOUT THIS TOPIC
Deputy Director of Finance	<ul style="list-style-type: none"> - Competitiveness (including the new size of the institution as the key driver, in terms of the number and type of academic programs) - Internationalisation
Registrar	<ul style="list-style-type: none"> - NOT CLEAR ABOUT THIS TOPIC
Professors	<ul style="list-style-type: none"> - Curricular Reform (including more institutionalisation, more flexibility and interdisciplinarity)
Students	<ul style="list-style-type: none"> - NOT CLEAR ABOUT THIS TOPIC

Source: The author, based on observational data and interviews

Appendix 21: Identification of a Past and a Present in the Particular Micro Context of University B

ISSUE TO BE COMPARED	PAST	PRESENT
Managerial Model	A smaller University in terms of programs and number of students	A bigger University with more than double the number of students, programs and type of programs (including new postgraduate programs)
	Basic idea of university management (less efficient, more decentralized, less technological, less professionalized in human resources and processes)	More developed idea of university management (more concern about efficiency and effectiveness, more use of technology, more professionalized and centralization of key processes of control and assessment)
	Bigger administrative structure	Less number of academic faculties to administer the academia and more concern about efficiency in other administrative structures
	Less interest about a culture of planning and a formal culture of quality assurance	A University with a clear emphasis on planning and quality assurance
Cultural issues	Academia and Administration with difficulties in working together	Academia and Administration working together in a better way
	Tradition and History as a key cultural capital and cultural value	Tradition and modernization (renewal) both together as key determinants of the new future of the institution
	A more feudal model of academia in which faculties do not properly work together	More concern and actual work among the different faculties including a growing culture of faculty negotiations
	Paternalistic model of education centred in a unique student group for each academic cohort	A renewed model of education in which there is more student autonomy, more professors “ex ante” preparation and less identity with the original group of students in the academic cohort
	Administrative and academic rigidity	More administrative and academic flexibility
	Local and Inward looking University	More internationally oriented university and open to the new environment of higher education

Source: The author, based on Documents analyzed, Observational data, Interviews and Restrepo (2008).

Appendix 22: Main Impact of Credit Framework Implementation on University Management and Actors Identifying those Impacts: The case of University B

MAIN IMPACTS ON UNIVERSITY MANAGEMENT	ACTORS IDENTIFYING THOSE IMPACTS⁷⁷
Changes in the structure of the university (Downsizing, new central offices of control and supervision, new departments)	Dean, Planning Director, Deputy Director of Finance, Registrar, Professors
Professionalization of Human Resources and human resource management	Vice Rector, Deputy Director of Finance
Development of new information systems (Academic, Administrative and Financial systems)	Vice Rector, Quality Assurance Manager, Deputy Director of Finance, Registrar.
Improvements in financial management	Vice President of Finance, Quality Assurance Manager, Deputy Director of Finance, Registrar.
Improvement in commercial (marketing and communication) management	Vice President of Finance, Director of Marketing Department, Deputy Director of Finance
New norms and regulations to deal with credit framework implementation	Vice Rector, Planning Director, Registrar, Professors
Cultural and managerial change in academic management (Interest for academic planning, more student autonomy, pedagogy concern, interdisciplinary dialogue, professor involvement in the curriculum, less paternalism with students, academia and administration working together, new tutoring system, new culture of negotiation among faculties and openness to the world needs in higher education)	Rector, Vice President of Finance, Dean, Planning Director, Registrar, Professors

Source: The author, Institutional Documents analysed, observational data and interviews.

⁷⁷ Students did not identify any change or any impact and they argued that was because they were new students and they did not take part in the implementation process of the credit framework.

Appendix 23: Type of Role in the Implementation of Credit Frameworks at University B

ACTOR	ROLE PLAYED IN THE IMPLEMENTATION OF CREDIT FRAMEWORKS
Rector	Pragmatic and Enthusiast
Vice Rector	Pragmatic
Vice President of Finance	Pragmatic and Enthusiast
Dean	Pragmatic and Enthusiast
Planning Director	Pragmatic and Enthusiasts
Quality Assurance Manager	Pragmatic and Enthusiast
Director of Marketing Department	Pragmatic
Deputy Director of Finance	Pragmatic and Enthusiast
Registrar	Pragmatic and Enthusiast
Professors	Pragmatic and Sceptics
Students	Sceptics

Source: The author, based on Documents, observational data and interviews and theoretically based on the model of Allen and Layer (1995) about diverse actors' reactions in favour of and against the introduction of credit frameworks. This model was explained in Chapter 3 of this research in the part on "*Institutional Actors and unintended consequences in university management*".

Appendix 24: Relevant Moments in the Implementation of Credit Frameworks –

University C

YEAR	RELEVANT MOMENT
1990-1997	Process of institutional change about internationalization, social relevance and quality assurance
1996	Institutional Project of Education was formulated (1996-2010)
1997	Important decisions about institutional decentralization, reduction of faculties and academic departments
1997-2001	Internal discussions about the curriculum transformation
2001	New information system
2002	Agreement 1 from the Academic Council about a “General Curriculum Structure” the First Curricular Reform
2003	New Strategic Plan
2004-2006	Internal institutional Debates, Assessment and Dialogues about the Curricular Reform from 2002. This process was called the “Re-building of the curriculum”
2005	Financial difficulties
2006	New Managerial Information System (ERP) to allow more efficiency on management.
2006	First Institutional Accreditation with high standards of quality
2007	Determinant Changes on the Students Regulation
2007	New Curricular Policy adopted by University C, including objectives like flexibility and the credit framework
2008	Agreement 29 from the Academic Council adopting the new Curricular Policy
2008	New Rector appointed
2008	Institutional accreditation formally attained by the University
2009	New Development Plan 2009-2018
2010	Second process of accreditation with high standards of quality

Source: The author, based on Documents analysed, Observational data and Interviews

Appendix 25: Purposes and Understanding of Credit Frameworks by each Actor at University C

ACTOR	UNDERSTANDING OR PURPOSES OF ACADEMIC FRAMEWORKS
Official documents including Educational Project	<ul style="list-style-type: none"> - One of the ways to understand the curricular reform and attain curriculum flexibility in order to be better (in quality), more international and more efficient. - A mean to attain improvements in access and retention in addition to five different entries and exits for students.
Rector	<ul style="list-style-type: none"> - A way to improve in quality assurance - An expression of managerial modernisation - A way to promote internationalisation (mobility and program international harmonization)
Administrative Vice Rector	<ul style="list-style-type: none"> - A mean of transparency - An expression of managerial modernisation (including efficiency and possible economies of scale or new ways of funding)
Dean	<ul style="list-style-type: none"> - Remarkable mean to develop a Curricular Reform - A mean to attain social relevance - A way to improve in quality assurance - A way to promote internationalisation
Planning Director	<ul style="list-style-type: none"> - A way to improve in quality assurance - A mean to get Social and academic relevance (including internationalisation) - Relevant mean to attain managerial efficiency and managerial improvement.
Registrar	<ul style="list-style-type: none"> - The most important instrument to develop a deep curricular reform.
Professors	<ul style="list-style-type: none"> - Remarkable instrument of the curricular reform - An expression of quality assurance
Quality Manager	<ul style="list-style-type: none"> - An expression of quality assurance - Better management (efficiency and transparency) - A way to develop a curricular reform

Source: The author, based on Documents analysed, observational data and interviews

Appendix 26: Main Determinants in the Implementation of Credit Frameworks at University C

ACTOR	MAIN DETERMINANTS IN THE IMPLEMENTATION OF CREDIT FRAMEWORKS
Rector	<ul style="list-style-type: none"> - New Managerial vision of the University - Quality Assurance
Administrative Vice Rector	<ul style="list-style-type: none"> - New Managerial vision of the University (including the interest in more efficiency and flexibility) - Curricular Reform looking for more flexibility
Dean	<ul style="list-style-type: none"> - Quality Assurance (including the institutional and program accreditation process) - Research and Postgraduate orientation of the university - Curricular Reform looking for more flexibility
Planning Director	<ul style="list-style-type: none"> - Research and Postgraduate orientation of the university - New Managerial vision of the University (including more integration between academia and administration)
Registrar	<ul style="list-style-type: none"> - Curricular Reform
Human Resource Manager	<ul style="list-style-type: none"> - New Managerial vision of the University (including the interest in more student and service orientation)
Quality Manager	<ul style="list-style-type: none"> - Quality Assurance (including the institutional and program accreditation process)
Professors	<ul style="list-style-type: none"> - Curricular Reform - Quality Assurance (including the institutional and program accreditation process)

Source: The author, based on observational data and interviews

Appendix 27: Identification of a Past and a Present in the Particular Micro Context of University C

ISSUE TO BE COMPARED	PAST	PRESENT
Managerial Model	Fragile institutionalisation	Stronger institutionalisation including the majority of the processes documented
	Weak internal coherence among academia and the administration	More interest in the integration between academia and administration and use of integrated information systems
	None or weakly planned university	A more developed planning culture including the use of an institutional educational project
	Big structure of academic units and academic departments	A reduces academic and administrative structure due to a downsizing program
	Weak decision making process	More agile and efficiency in the decision making process
	A more decentralized institution	Growing centralized structures
Cultural issues	A local and regional oriented institution	A more national and international oriented university
	A culture open to continues dialogues and debates	A cultures with fear about very open discussions from the directive staff
	Academia separated from the administration	Growing interest on the integration between the academia and the administration
	Poor orientation to service and potential clients	A stronger service and “client” culture

Source: The author, based on Observational data and Interview

Appendix 28: Main Impact of Credit Frameworks Implementation on the University Management: The Case of University C

MAIN IMPACTS ON UNIVERSITY MANAGEMENT	ACTORS IDENTIFYING THOSE IMPACTS
Changes in the institutional structure (including downsizing and more integration between academia and administration)	Rector, Administrative Vice Rector, Dean, Planning Director, Registrar, Quality Manager, Human Resource Manager, Professors
Centralization of certain roles (including budget and investment management and central committees to manage the credit framework and the curriculum policy)	Rector, Administrative Vice Rector, Dean, Planning Director, Registrar, Quality Manager, Human Resource Manager, Professors
Implementation of an Integral System of Management (including more institutionalisation of processes, policies and institutional documents)	Rector, Dean, Planning Director, Quality Manager, Human Resource Manager, Professors
Establishment of new institutional norms, regulations and policies	Registrar, Quality Manager, Human Resource Manager, Professors
A simplified policy and new possibilities in the creation of new academic programs (undergraduate and postgraduate programs)	Rector, Registrar, Professors
More efficiency in the academic administration (including the use of academic resources, adjustments in hiring professors and better administration of students groups)	Administrative Vice Rector, Planning Director, Registrar
More efficiency in the use of the infrastructure	Rector, Registrar
More concern about a culture of service or a “client” culture”	Planning Director, Quality Manager, Human Resource Manager

Source: The author, based on Documents analysed, observational data and interviews

Appendix 29: Type of Role in the Implementation of Credit Frameworks at University C

ACTOR	ROLE PLAYED IN THE IMPLEMENTATION OF CREDIT FRAMEWORKS
RECTOR	Enthusiast and Pragmatic
ADMINISTRATIVE VICE RECTOR	Enthusiast and Pragmatic
DEAN	Enthusiast and Pragmatic
PLANNING DIRECTOR	Enthusiast and Pragmatic
REGISTRAR	Pragmatic and Sceptic
QUALITY MANAGER	Pragmatic
HUMAN RESOURCE MANAGER	Enthusiast
PROFESSORS	Pragmatic and sceptics

Source: The author, based on Documents, observational data and interviews and theoretically based on the model of Allen and Layer (1995) about diverse actors' reactions in favour of and against the introduction of credit frameworks. This model was explained in Chapter 3 of this research in the part on "*Institutional Actors and unintended consequences in university management*".

Appendix 30: Key Elements of University Management – Revision of International and Colombian Literature on Higher Education

Author	Key Elements of University Management
(Wilson, 2005)	<ul style="list-style-type: none"> • Governance, structures (formal and informal settings of power and authority, including governing and non-governing bodies) and interaction and coordination within the structures • Processes (decision-making processes in the different institution, functions, and how actions are undertaken to achieve goals) • Regulatory aspects (culture and values) • Managerial techniques, and operational methods (how the institution is administered both at the academic and administrative level) • Managerial tools (strategic plans, infrastructure, marketing, human management, budgeting, financial management, communication systems, quality assurance methods and management, etc...) • Capability with change • Environmental relationships • Values
(Deem, 1998; Deem, 2005b; Trowler, 1998a; Schellekens et al., 2003; Watson, 1986)	<ul style="list-style-type: none"> • Organisational forms and structures • Technologies • Managerial practices and techniques (use of cost centres, marketing, performance evaluation, and internal market development) • Values, culture, and norms – The institutional “<i>Ethos</i>” • Institutional policies • Goals and objectives (mission statements, expected outcomes, planning system) • Core activities (research, teaching, community services) • Organisational procedures and forms • Managerial practices (funding, staff management, policy making, competencies) • Resources (installations, infrastructure) • Facilities (support for teaching, research, students, library, technology, and study material) • Infrastructure (locations and technical conditions for professors and students) • Organisation (forms, charts and structures) • Goals and educational concepts (objectives, institutional characterization and institutional position in the society) • Process characteristics (information and communication, assessment and evaluation, steering and planning)

<p>(Vroeijensitjn, 2001; Pabon, 2006; Steed, Maslow, & Mazaletzkaya, 2005; Torres & Pina, 2007; Calvo, Leal, & Roldán, 2006)</p>	<ul style="list-style-type: none"> • Management as an input: Enablers like leadership attitudes, people (actors), policy and strategy, partnerships, resources, and processes. • Management as a helping level (administrative and technological management, people management, financial management, marketing and commercial management, quality assurance and control level, and academic and services management) of the institutions and including a strategic level and a mission level. • Management seen in relation to outputs and processes.
<p>(Ferlie et al., 1997; McNulty & Ferlie, 2004)</p>	<ul style="list-style-type: none"> • Organisational forms and structures • Organisational strategies • Management practices • Distribution and organisation of power • Organisational culture • Control systems • Strategy • Culture, ideology, and organisational meaning
<p>(Ford et al., 1996)</p>	<ul style="list-style-type: none"> • The Business System: <ul style="list-style-type: none"> ○ Vision ○ Strategy ○ Objective and policy ○ Culture/ Values ○ Learning infrastructure ○ Business processes • The Social System: <ul style="list-style-type: none"> ○ Actors ○ Organisational structure • The Technical System: <ul style="list-style-type: none"> ○ Products ○ Inputs ○ Processes
<p>(Marginson & Considine, 2000)</p>	<ul style="list-style-type: none"> • Governance (leadership and strategy, values, decision making system, resource allocation system, mission and purposes, patterns of authority and hierarchy) • Institutional culture • Competition • Managerial strategies • Institutional identity • Inter-institutional convergence and divergence
<p>(Amaral & Enders, 2007)</p>	<ul style="list-style-type: none"> • Governance (quality, funding, and steering mechanisms) • Institutional dynamics (governance structures, roles of Deans and Heads of Departments, stakeholder participation)

(Díaz , 2002)	<ul style="list-style-type: none"> • Structure and organisational design • Power dynamics and power structures • Principles and values • Management systems and methods of resource allocation and communication • Decision making process • Coordination and integration among academics, administration, and finance • Capability to change
(Toro, 2006)	<ul style="list-style-type: none"> • Structure

Source: Taken from Restrepo (2008) and adapted with new information

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